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MR. ABERNETHY'S

PHYSIOLOGICAL, PATHOLOGICAL, AND SURGICAL OBSERVATIONS;

DELIVERED IN THE

ANATOMICAL COURSE OF LECTURES,

At St. Bartholomew's Hospital.

On the Blood-vessels and Blood.

Blood-vessels.—The blood-vessels are of an exceedingly *elastic* nature. If you take a *brachial artery* out of the arm, it will not be half the length it was when in the arm. If you cut it, it shrinks up immediately. Now there is both a benefit and disadvantage arising from this circumstance: the benefit is, that when it is cut it recedes, contracts at the lips, and, in fact, becomes quite closed; and the disadvantage is, that a once cut artery has always a tendency to open again. When what I may call the *plug* is removed, the wound is again opened, and hæmorrhage ensues.

Structure of Arteries.—Slit an artery open, and what do you see on the inside of it? It is *a membranous tube*; in this particular all the blood-vessels agree. Nothing can be imagined better, for the progress of the contents of the vessel, than gliding along this finely polished surface. But if you take an artery and cut it open, you may tear or pull off a very *thin pellicle*, which is, in some degree, elastic; and I believe this induced Mr. Hunter to call the internal coat, the *cuticular coat* of an artery. But is this all of the internal coat of an artery? Nay, for certain it is not: you may turn down the internal coat, and what you so turn down is perfectly unyielding, and excessively strong. It is this which causes the artery to have regularly a circular form. Inject an artery as much as you please, and you will never alter the form of it; but inject it too much, and *crack* it will go. This internal coat must be strong and unyielding. It is so much so, that Scarpa has attributed the formation of every aneurism to the cracking of the internal coat of an artery. Mr. Hunter found that a force of 90lbs. was necessary to burst the lining of an artery when injected.

Then, surrounding this, there is a *reddish* substance. Mr. Hunter says, if you make a section of a healthy artery that is near to the interior, there is a reddish substance, which he believes to be *muscular*. Bichat describes it in the same way, but calls it the *arterious tissue*, and will *not* allow it to be muscular. I do not pretend to say, that Mr. Hunter's description of an artery is a clear account; I cannot give a clear account of one; but, to be sure, I cannot understand Bichat's account, any more than any body else. For my own part I think, if I cut up small arteries, that I can see muscular fibres: I see the internal coat in ridges, as if contracted by muscular fibres. But what convinced Mr. Hunter was, experiment: he attended the shambles where animals were bled to death; and, of course, the arteries of those animals would contract themselves, upon the gradual diminishing of the blood in the vessels. He measured the *area* of the arteries, as he found them in animals killed in this manner. He then introduced something into them to intervene, and do away with the effect that had been thus produced; and then he measured the area, they being restored to as near their natural size as their elastic property would admit of. Mr. Hunter, under these circumstances, found that the aorta had contracted one-twentieth; that arteries corresponding with the celiac artery, had contracted one-sixth; that those corresponding with the size of the radial and ulnar, had contracted one-half their ordinary size; and, in short, that the small arteries were closed altogether. I wonder that any surgeon, who had ever attended an operation, ever doubted that small arteries close themselves: you are taking away the breast of a patient, and out gushes a stream of blood in your face; you put your finger on the part, and stop the flow of blood; the operation is proceeded in; then, when you come to

look for the cut arteries, you wash away the blood; you sponge the part from which the stream proceeded, and not a drop of blood more is seen to flow; you may see the artery, but with its mouth closed, it's a perfect chord. You may twitch the end of an artery that has been thus closed, until you open it again, and then the blood will flow once more.

I have cut through the ulnar and radial arteries to get blood from them, and found that they were perfectly solid. But Bichat himself allows the greatest degree of contractility to the minute arteries. To the extremities of all the minute arteries, the greatest possible irritability is admitted by all. Now I say, how strange is this! Where is it to begin? Is it not more rational to suppose, that all arteries are endowed with a contractile power, and that that power increases in proportion as the artery recedes from the heart? I can only say, that such were the opinions of Mr. Hunter, and they appear to me to be the most rational.

Now, then, for the *elastic coat* of the artery; this, which we strip off. They speak of it as a condensed substance. What it is, I don't know. I have heard some say, it is more like the *ligamentum nuchæ* than any thing else; but it is certainly very elastic, affording just that resistance to the power of the heart, which is necessary for that part. If it had not this quality, there would be such a percussion on the heart, that vitality would be destroyed. And it was left to the *Argus-eyed* Mr. John Hunter to observe, that where the most elastic power was wanted, there you find it; that there was more elastic power on the convex, than on the concave side of an artery.

Well, but as arteries become minute, they gradually lose their elastic coat, till at last they have none at all; and where there is a contrivance to break the propelling force of the blood, they lose it altogether: as, for instance, in the brain, there is no elastic coat to be found in the arteries there; there is such a winding of the arteries through bony channels, as that the force of the blood must be broken before it gets to the brain, so that no elastic coat is required. Now these are things worthy of your attention.

Distribution of Arteries.—The next thing I have to observe upon is, the distribution of arteries throughout the body. If an artery sends off a branch, it is generally sent off at a *half right angle*. Some say, that some branches of arteries go off at *right angles*; I don't believe it, but you may, if you like. (Laughter.) But then they say, this is where peculiar secretion is wanted, such as in the *renal* arteries. O, it's not worth making a puzzle about this; the belief was that arteries would receive the propelling force of the heart most, in proportion as they ran parallel to the trunk. That's the physiological belief, and it seems to me to be very well founded.

Then the angles of the extreme vessels are perhaps more various; but I don't think there's much to be said on this subject.

Then another thing, it was formerly taught that arteries were *conical tubes*, from observing the state of the artery when it was taken out. Now if the blood was thrown into a conical tube, I apprehend there would be a continual stoppage presented to it. Haller says, that if you examine the area of the minute arteries, you will find it to be larger in proportion than that of the aorta. He comes to this conclusion at last, that the area of the branches of the minute arteries, are *one-third* larger than that of the large ones. You know that Mr. Hunter examined the *carotid*, and other arteries, upon this subject; and he found, that out of several small arteries, the area was larger as it receded from the heart. It is rational to believe this, and therefore I try to enforce it.

Now no arteries are perfectly straight; they are all zig-zag in some degree. But there are arteries excessively tortuous, such as the *splenic* artery. And what physiological notion are you to form from this? Will this not prevent the extreme force of the blood? O yes; and we believe that the turnings and windings of arteries tend to impede the velocity of the blood. I shall ever believe it as long as I live; you may believe it or not, just as you like; but you see I keep to the old physiology.

Then we come to this, that in observing the branches of arteries, we have presented to our minds what we see taking place in *trees*, the division and subdivision of the branches from the trunk. But here is a circumstance in which the *simile* does not hold good, namely, that the branches of the arteries coalese; that two branches will join, will have their mouths communicate with each other, and become one conjoined tube. I mention that, for the sake of explaining the name that is given to this; if you take the Greek word, it is called the *anastomosing*, or *inosculation* of arteries. Now what will the effect of this be? Why I say, that when two arteries join in this way, it must tend greatly to impede the force of the blood. There is a current of blood flowing in each, and when they come dashing against each other, they must mutually retard the force; and this I take to be a fair reason why we so seldom meet with anastamoses in the larger arteries; but we have plenty of them in the smaller ones.

You know it is very well understood now that diseases occur in those inosculations.—Now what's the good of the communications? O, that's evident; if one artery did

not communicate with another, whenever a trunk were cut off, all the parts to which the branches were distributed would want nourishment. Well, then, you must be aware that the same end is answered by numerous communications that would be answered by one. In the case of the brachial artery being tied, though there are but few vessels as principal channels by which the blood can be circulated to the different parts, yet there are myriads through which it can be sent, and the blood does pass from above to below with a surprising speed.—Now these things happen only rarely in the large, but constantly in the small arteries; and the more subtile the injection that is thrown into the small arteries is, the greater number of anastomoses appear. And those anastomoses among the minute vessels seem to retard the flow of the blood, and such retardation was, in all probability, requisite for those changes to take place in the fluid which fits it for the secretion and nourishment of the body.

But how do arteries ultimately end?—Ultimately they end in veins. An artery becomes reflected to the heart, and becomes a vein. This is seen by the microscope; nay, it may be seen by injections. But I don't believe that, till of late years, people were acquainted with the *size* of the arteries that terminate in veins. I take what I now show you to be the first preparation that was made of this kind; I never heard of such an one in this town, and it has been made, I should think, about 50 years. The arteries were injected with wax, and the wax is returned by the veins, and it shows the large arteries that receive the wax returning and becoming veins. Now every one knows that this can be done. I remember that Mr. Liston, of Edinburgh, thought it could be done, and I wanted him to make a preparation of the kind, but he did not do it. We have had the veins injected in this place, but the extremities were *fat*, and gentlemen did not take pains to make preparations of them. People have got *lazy* since I was young. (Laughter.) However, it can be done. Well, then, how do arteries ultimately terminate? In veins, to be sure. You may prove this by quicksilver: throw quicksilver into the arteries, and the whole will return by the veins; so that there is, in reality, to speak in a speculating sort of way, something like a descending series of vessels. But if this were the whole, to what good would the circulation be carried on? There must be some other termination; and so there is, for a fine artery goes off from the part where the vessel is reflected, and terminates by an open mouth; this produces something from the circulating blood, and it is called the *secerning* artery. Can you see those secerning arteries? No. What makes you believe there are those arteries then? Why, when you inject arteries, you see something oozing out from the parts, which you conclude to be the secerning arteries. It is by analogy that you draw this conclusion. How can the parts lay down the atoms that fill up the body, but by open mouths? It is from analogy we say that every artery terminates in a venous extremity, and in a secerning extremity ultimately. But in glandular parts you do see the secerning extremities.—Books have been written upon the subject, and therefore I need not dwell upon it. O, be assured of this, that the great mass of blood is speedily circulated; that it is driven from the heart with great velocity, and returns by the veins. It is but a small portion of the current that goes into those parts which are calculated for secretion and nutrition.

Structure of Veins.—Now I come to the veins; and what 's the structure of veins? Internally, *membranous tubes*, surrounded with other substance; a very thin membrane it seems to be. You have *no pellicle* here. Thin as the membrane is, however, it is stronger than the internal coat of the artery. Mr. Hunter found that a greater force was necessary to burst the internal coat of the *vena cava* than that of the *aorta*. It is elastic in as great a degree as that of the artery. You might stretch a vein as far as you would stretch an artery, and it would recoil again, but it would require a smaller power to stretch a vein to its utmost than to stretch an artery to its utmost. Well, the question is, whether they are *muscular*? O, they have a muscularity, no doubt, suited to their functions; this is a point I have before spoken of. It's absurd for us to suppose that this power of vital contraction operates in the same manner in *all* parts; it is a power suited to the different functions of the different parts. Then what do the veins do? They congregate together and form tubes, and all the tubes eventually collect into the *vena cava*. What is the consequence? That if the blood is to go through narrower and narrower channels, it must go with increased velocity. With respect to this, I might say, that if you were to open a small vein the blood would flow slowly from it, and soon coagulate; but you know how it springs from the arm; and then that it gushes from the vein near to the heart with as much celerity as it does from an artery. There 's always plenty of room in the veins; the veins are not filled with blood; there 's room for the blood to return by the *deep-seated* veins, or by the *superficial* veins. The superficial veins have *valves* to prevent the reflux of the blood. The blood is thrown out from the heart, passes rapidly through the large vessels, tardily through

the small ones; it is thrown out through tubes which gradually augment in diameter; it returns through tubes gradually diminishing in diameter; and the current is accelerated as it goes towards the heart, but diminished as it recedes from it.

Some have set themselves about to inquire with what degree of force the heart projects its blood, but it is a very difficult thing to determine, and no great good results from determining it. Dr. Hales' is allowed to be the best method of determining it. He determined it by putting a pipe into the artery of an animal; and I think he makes the force of the heart equal to something more than 70lbs. Mr. Hunter found that a force of 90lbs. would burst the aorta; but I am willing to acknowledge that Mr. Hunter was wrong there, because this was no proof that that would have burst it in the *living*. He had tied the artery, and thereby stopped the circulation, but in the living body the blood is free to move on.

I did not state to you that the elasticity in those parts tended to urge the blood on. It was an omission of mine, but it was not an important one. I may omit things, but I am not willing to tire you with the repetition of facts which I believe you all to be well acquainted with. It does not seem to me important, that you should have any *precise knowledge* of these facts. It is sufficient to know, that the heart propels the blood forth with great power, and that it returns with less force. Dr. Hales made an experiment which deserves your consideration, because people deny what I tell you, and they quote instances of experiments in hydraulics. Now Dr. Hales made an experiment of this nature; he put a vessel in the artery of a dog, with a column of water capable of making a pressure equal to what he estimated the force of the heart of that animal to be. Therefore there was a force in the vessel equal to the force in the heart. He took care to fill it up, as the water seemed to escape. He then laid open the abdomen of the animal, and of course the water oozed from the cut arteries; he divided the intestines opposite to where the *mesentery* was attached, and the water issued out; he made a cut in the parts opposite the mesentery, dividing arteries of a tolerable size, and the water flowed out, and where he cut a large artery, the water gushed out in a stream. Now there is an experiment with the very tubes themselves, all tending to convince you, that this theory, if I may call it so, of the circulation, is a correct one. The view which is generally understood, I believe by the best physiologists, is a known accurate view of the subject.

Of the Qualities of the Blood.

Now having done with the description of the circulating vessels, and of the circulation, I have yet to speak of the qualities of the blood, before I can proceed to speak of its *nutrition*; and as the description of the blood cannot take long, I may as well proceed to speak of it now.

You all know what the blood is: it separates into *serum* and *crassamentum*, but the crassamentum is a compound. You may wash all the *colour* out of it, and leave it a *white cake*. I now show you a preparation of blood that has been thus washed. You may bleed a person into water of the temperature of 120; and if you stir it round with a whisk, all the cake will congregate in fibres around the whisk without colour. Well, this was called the *fibrous part* of the blood. Then it may be said, there are *three parts* evidently in the blood; the colour, the cake or *basis*, and the serum. Well, now, suppose you examine the serum. If you put it into a cylindrical tube, and immerse the tube in water at 180° Fahrenheit's thermometer, the fluid serum becomes *solid*, and you may turn it out of the tube in a solid cylindrical piece. If you take it out in this way, and put it into warm water, a good deal of that which was solid will become serum again, but a good deal will still remain solid; and if you examine that which still remains solid, you will find it to be like *white of egg*—albumen. If you immerse once more that which was left a serum, you will find it *solid* again, and thus it was considered to be *gelatine*. Curious enough it is, that all the French writers state it to be gelatine; and it was not till lately that Dr. Bostock showed it was not gelatine at all; but if you ask the Doctor what it is, I don't believe he can find a name for it; and that's the predicament in which chemists may often be, with regard to many of the animal fluids, I am sure. We have, however, nothing to do with them, but with their sensible properties, they are so modified. At all events, this is something with respect to which that which may be evaporated from it becomes a tremulous solid. Dr. Bostock is inclined to call it *mucosity*; but it is not mucus. Besides this, you have *soda* in the blood; and you may coagulate the serum by *acids*; and this led another doctor to speak of the serum as if it were a sort of *soap*, where the water was kept together by a sort of *alkali*. Likewise, you have a sort of yellow sticky stuff which is in small quantities in the blood, and which they call the *serosity* of the blood. Well, I have nothing to say about it, for it's hardly worth while to tell you what they have said about it; because, the end of it is, that they don't know what it is.

(Laughter.) And you have *salt*, which is formed sometimes in the round of circulation, and sometimes taken in in what we eat. We eat a great deal of sea salt; and it is curious to see the crystallization of the serum of the blood through a microscope.

Now, having done with the serum, I go to the cake, or the crassamentum. Well, that is very queer stuff indeed. You may *boil* it for ever, but you will never make any *broth* (laughter) of it, as I can testify; for I know that a piece of what I now show you was boiled for a very great length of time. It is the same sort of stuff as that which the *muscular fibres* are composed of, and it has a disposition to become fibrous. If you pour *nitric acid* on it, you will get a sort of *azote* out of it. It has always been considered as a highly animalised part. That's all I need say about it.

With regard to the *colouring matter*—O, this was said to belong to *globules* in blood. There are globules, as I told you, in the blood, and most wonderfully numerous they are. They are so minute, that I cannot believe any reports of them, when they are said to be examined by the common microscope. Haller says he saw them as big as *peas*, through the *solar* microscope; and I remember that I once looked through a solar microscope which was carried about the country by a *Dr. Cutterfelto*, (laughter,) and I saw them as big as peas too. I am ready to swear it, but it's of no use, for nobody would believe me, if I were to do so. (Continued laughter.) They are said to be about the *three thousand and two hundredth part* of an inch in diameter, but that is of no great consequence.

Well, you see those things are of different specific gravities. The serum is a little heavier than water; it is, as 1030 to 1000, perhaps less than that; it may be as 1025 to 1000. I really forget, but it's not important. It's undoubted, that the crassamentum is heavier than the serum, for it sinks; and it 's evident that the globules are heavier than both, for they subside at the bottom of the cake, when the cake is slow in forming, as is the case in inflammatory blood.

But as to those globules, are they *red*? No, they are not indeed. Now that's a queer thing; and it was only found out of late by Dr. Young. He found out that the red colour of this blood will rise in water. It seems to have an affinity to water. If you put a piece of flesh into a bucket of water, the blood will rise up through the water, and make it a transparent liquor, but the globules will fall to the bottom. Dr. Young saw this; he saw that the globules sunk, and that the blood rose. Then what are we to think of it? Why, only that the colouring matter of the blood has a strong affinity to those globules; and the way to get to them is to wash the *clot* well; if you do that in water, the globules will subside. Brande has shown that the colouring of blood is susceptible of colouring other matters.

Now, with regard to those globules and the colouring matter, when they subside, upon chemical analysis they are found to be like the rest of the blood. But they are found to contain *iron*, and that is a very curious thing. Is it not curious too, that Brande, of late, should deny this? But it is asserted by Brazelius, and by a great many others indeed, who have made experiments, and got iron from it in abundance. This may perhaps be one of the causes of their greater specific gravity.

Now that 's all I have to say on the subject, but I must add that it 's a very satisfactory examination, as it shows you that the blood contains the rudiments of all the body. What do you find that the body is composed of, but of *fibres*? Some *insoluble*, and some *soluble*. All this is to be found in the blood. You have also something in the blood which is susceptible of considerable mutations of colour, and you see such mutations take place throughout all the body. I say, we know but little, but that there is a sort of satisfactory conclusion come to from what we do know. And having gone so far, we shall not proceed further.

LECTURES

ON THE

Diseases of the Nervous System,

BY

DR. CLUTTERBUCK.

Lecture XIII.

Theory of Apoplexy.

Gentlemen,

We call that state *apoplectic*, in which the *sensorial functions*, as we term them, viz. *sensation*, *voluntary motion*, and *mind* or *thought*, are suspended or abolished. Now this may take place without any material disturbance of other functions, as *circulation*, *respiration*, *absorption*, *secretion*, and *excretion*; all of which are, at times, sufficiently well performed. Apoplexy, therefore, is a *brain affection*, and of that class which I have denominated *non-febrile*, although there are numerous instances where much febrile action attends

apoplexy; a fact that merits attention, as it serves to show the connexion of the disease, on many occasions at least, with inflammation.

There are many *remote* causes capable of producing apoplexy, and those of very various natures. But it is the *immediate* or *proximate* cause, that is the proper object of theory; in other words, the actual state of the organ affected, and from which the symptoms directly spring: this is the inquiry we are now to enter upon; and if we can conduct it to a successful issue, it will be productive of great advantage in practice; as, by showing the intrinsic nature of the disease, it will point out to us the proper object to be aimed at in the treatment; and, at the same time, prevent an indiscriminate, and therefore, probably, an injurious, use of remedies. Now I had better state at once the conclusion I mean to lead you to, as, in my judgment, the most satisfactory: it is this, that the essential symptoms of apoplexy, that is, the suspension of the *sensorial functions*, is the effect of interrupted circulation in the brain: we shall see presently, how far the different *remote* or *occasional* causes are capable of producing this effect. It can hardly be doubted, I think, that interrupted circulation in the brain is an adequate cause of the interruption of its functions.

Dissection alone is by no means competent to our purpose. The changes observed in the brain after death in apoplexy, are exceedingly various; while instances also not unfrequently occur in which no morbid change can be discovered. What is seen, therefore, cannot be the *immediate*, but only the *remote*, cause of the symptoms. *Dissection* here, as in many other cases, affords a clue to guide us in our investigations into the nature of the disease, but does not of itself point this out. It tends to destroy hypothesis or unfounded speculation, and serves to correct wrong conclusions that may have been come to, by showing their incongruity with the actual state of things; the advantage it affords in this way, therefore, is rather negative than positive. The intrinsic nature, the essence, as it were, of disease, is too obscure, and too evanescent to be caught by the forceps, or displayed by the scalpel of the anatomist. I make these observations in order to show you that there is a study of diseases altogether independent of anatomy; and that you should not imagine you have become a master of the art of medicine, as a necessary result of your proficiency in anatomy, or even physiology. These, doubtless, are important aids; but they are auxiliary only, and do not constitute the *science itself* of medicine, which is capable of being carried to a considerable degree of perfection without them. Supposing that *dissection* were at all times competent to discover the disease present, (to which, however, there are numerous exceptions,) it still would not materially assist us in practice; for the treatment of disease is governed by a great variety of circumstances that are quite beyond the pale of anatomy. The most perfect anatomist and physiologist may be altogether ignorant of the intimate nature of disease, which is far too subtle to be detected by the senses: still less will those sciences explain the proper treatment of disease; for this is the result of observation and experience, which are only to be acquired by *clinical* study, that is, by actual observation of diseases themselves, and the effects of remedies upon them.

Apoplexy appears, at times, to take place spontaneously; that is, without the application of any obvious cause. Partly, however, by observation, and partly by the aid of dissections after death, we have been enabled to discover the greater number, if not the whole, of the *remote* or *occasional* causes, the knowledge of which is doubly of importance, in regard to *prevention* and *cure*. I have given it as my opinion, that the immediate, or, as it is commonly termed, the *proximate cause* of the suspension of functions which constitutes apoplexy, is interrupted circulation in the brain; and this state, you will readily perceive, may, and even must, be induced by most of the acknowledged causes of the disease. Some of them, indeed, have been supposed to operate in a different way; namely, by destroying the *mobility of the nervous power*: these will require to be considered apart. It will be useful, in the mean time, to recapitulate the different *occasional* causes, as far as they have been ascertained: and they may be arranged in the following manner.

1. *Direct pressure* made upon the brain externally.

2. *Pressure from internal causes*; as *extravasation of blood*; *accumulation of serum* in the ventricles, or between the membranes; *tumours* formed in the brain, and pressing upon the surrounding parts.

3. *Preternatural fulness of the arteries* of the brain.—These different causes have generally been supposed to operate by compressing the *medullary substance* of the brain, and thereby to interrupt its functions. With more probability, however, the effect may be referred to *interrupted circulation*, as already stated.

4. *Impediments* to the return of blood from the brain.

5. *Narcotic substances*, especially *alcohol* and *opium*.

6. *Inhalation* of certain noxious gases.

7. General and acute inflammation of the brain, whether in the form of *phrenitis*, *hy-*

encephalus, or *idiopathic fever*. I place this the last in order, as it has not been usually admitted among the causes of apoplexy.

Some other *remote causes* of apoplexy have been assigned, the operation of which is very obscure. Such are *flatulency* in the stomach; *gout*; *concussion* of the brain; the *electric shock*; *extreme cold*; and *ischury*, or total suppression of the urinary secretion. I shall proceed now to examine the different causes somewhat more in detail.

1. *Direct pressure* upon the surface of the brain: as by a fracture of the skull, with depression of a portion of bone; or by blood effused immediately beneath the skull. These are among the most simple causes of apoplexy; and to understand their effect in interrupting the circulation of the brain, as the immediate cause of the apoplectic symptoms, it is necessary you should revert to what was before stated, respecting the peculiarities of the brain, as long ago demonstrated by the late Dr. Monro of Edinburgh; namely, its incompressibility, and its confinement in an unyielding case of bone, the cavity of which it at all times completely fills. Now the obvious and necessary result of these circumstances is, that when pressure of any kind is made upon the brain, the blood will be forced out of the vessels, and thereby the circulation be interrupted; to a greater or less extent, according to the degree of pressure applied. The effect, in this case, will not be limited to the part to which the pressure is applied, nor even to its immediate neighbourhood; for the cerebral substance being incompressible, the remotest vessels will be as liable to be compressed, as those in the vicinity. And thus we easily understand, why the pressure of a finger upon the naked surface of the brain, immediately suspends all its primary functions, in other words, induces an *apoplectic state*; which lasts no longer than till the compressing cause is removed. When, however, the pressure is very considerable, and suddenly applied, not only will the *proper* or *special* cerebral functions be interrupted, but the muscles of respiration, and even the heart itself may be paralysed, and death quickly ensue. We are told by *Major* Cruise, in his "Journal of a Ten Months Residence in New Zealand," that the mothers in that country, in order to destroy their female children, press the finger strongly upon the opening between the bones at the top of the skull, (the *fontanel*,) and thereby cause immediate death. In like manner, blood largely and suddenly effused in the interior of the brain, often proves immediately fatal.

That these causes operate in the way I have stated, namely, by *interrupting the circulation of the brain*, appears sufficiently probable. The cause must be admitted to be adequate to the effect; for it can hardly be supposed that the functions of the part can be carried on, independent of the circulation; and, from the peculiarities already mentioned, it is evident that the first effect of pressure upon the brain, must be to interrupt the circulation. No doubt, the pressure so applied must also have the effect of deranging more or less the relative position of parts; and in this way, perhaps, contribute to the disturbance of functions: but of this we are less certain. The evolution of the brain, produced by a large accumulation of fluid in the ventricles, shows that the organ will bear to have its parts greatly displaced, and still be able to perform its functions tolerably well.

2. *Pressure* from internal causes; as *extravasated blood*, *serous accumulation*, and *tumours formed within the brain*; these are all manifestly calculated to interrupt the circulation through the brain, by the pressure thus made upon the surrounding parts. These causes are the result of chronic disease in the brain, and which consists in slow inflammation, and its consequences. Such local and partial disease in the brain, may give rise to *apoplectic* symptoms in different ways. One is, by *extravasation of blood* from rupture of vessels, the *hæmorrhagia cerebri* of Hoffman. This may be conjectured to have taken place, where the symptoms have come on suddenly, and with great violence; as in what is termed *a fit of apoplexy*. And in these cases, a quantity of blood is almost universally found extravasated in some part of the brain, and which will have the same effect as external pressure in interrupting the circulation through the organ. The effusion of blood, however, is not always so sudden as to kill instantly; but may take place gradually, the stupor increasing from hour to hour, till the fatal termination.

Now this accident, of rupture of vessels in the brain, and consequent extravasation of blood, is very generally, if not constantly, the result of previous disease in the part; as is proved by the preternatural softening, or other alteration of structure, in the vicinity of the effused blood, that is almost invariably found in these cases. Blood-vessels do not readily burst, unless previously diseased. Accordingly, such fatal cases of apoplexy are very generally preceded by symptoms denoting disease in the brain; such as pain in the head, giddiness, or other disturbance of the *sensorial functions*.

Another result of such organic disease in the brain, is *serous accumulation*; which is always, I believe, found in these cases after death, in addition to the altered structure just alluded to. I may remark here, that the term *effusion*, so generally used in these cases, is an improper one; as it implies something very different from *secretion*, the

only process by which *serous accumulation* can take place. Such accumulation is obviously calculated to impede the circulation in the brain, as well as the other compressing causes already mentioned. The symptoms, in this case, come on slowly; because the accumulation is slowly formed, absorption still continuing to go on, and thus counteracting, in some degree, the increased exhalation. The collection of fluid found in many of these cases after death, is very considerable, even where the disease has not been of very long standing, nor the head altogether enlarged; and that the functions in such circumstances should be still capable of being carried on, in a manner consistent with life, is only to be explained by the probable fact, that a portion of the brain is wasted by slow absorption, so as to give room for the vessels to act. This variety has been termed *serous apoplexy*, though the accumulation of fluid is, perhaps, the least important of the changes that have taken place.

The morbid structure may of itself, and independent of either *sanguineous* effusion or *serous* accumulation, give rise to apoplectic symptoms; for being the result of slow inflammation, the part will be both tumefied and indurated; and thus make pressure on the blood-vessels around, as effectually as any of the other causes mentioned. And thus you will readily comprehend the varied character of the disease in such cases; for while the functions of the diseased part may be excited and disturbed, so as to give rise to violent symptoms, other parts of the organ, suffering merely from pressure, will have their functions simply impaired or suspended. All this is consistent with experience. We often find the *voluntary power* violently and preternaturally exerted, where *sense* and *intellect* are wholly lost, as in epilepsy. So, on the other hand, the *mental function* may be deranged, while neither *sensation*, nor the *voluntary power*, are at all disturbed. These differences depend upon the particular seat and extent of the disease in the brain. In all these cases, *inflammation* is the real disease, and that which ought to engage our attention in practice. The *apoplectic* symptoms are but secondary effects, that of themselves merit but little notice.

3. *Preternatural fulness of the arteries of the Brain.*—This state of the arteries of the brain is the result of increased action, into which they may be thrown by various causes. The arteries of the brain are excited into increased action by violent impressions upon the different organs of sense; by the *hot bath* (which perhaps belongs to the head just mentioned); by great voluntary exertion; by too intense mental application, and by emotions of mind; lastly, by vinous liquors taken into the stomach. All these causes have obviously the effect of increasing the arterial action of the arteries going to the brain, and may be presumed, therefore, to have the same effect within; as indeed the throbbing head-ache, that attends many of these cases, seems sufficiently to prove. Arteries never continue long in a state of increased action, without at the same time acquiring an increase of size; the effect of such distention of arteries in the brain, will be readily understood from what has been already said: it must necessarily have the effect of compressing the veins, and thereby interrupting the circulation.

A great deal has been said about *venous congestion* in these cases, but of which no satisfactory proof has been offered; nor is it consistent with the physiology of the organ, as I on a former occasion endeavoured to explain to you. From want of space within the skull, the *arteries* and the *veins* cannot both be preternaturally distended at one and the same time. The turgescence of the veins observed after death, is only a proof that the arteries at the time of death contained an unusual quantity of blood, of which they disgorged themselves into the veins as the last act of life; similar to what is observed throughout the system, the blood being every where found principally in the veins after death. The veins are, in fact, entirely passive on the occasion.

These causes of arterial excitement in the brain, do not usually produce the effect, unless where a predisposition to apoplexy already exists. Where this is the case, such causes ought to be particularly avoided.

4. *Impediments to the return of blood from the brain.*—These are occasioned by—1. *stooping*, by which the head becomes the most dependent part, and the blood in its return from the brain, has to move against gravity. 2. Pressure upon the veins of the neck, by ligatures, tumours, obesity, or twisting of the head round. 3. Tumours of any kind pressing on the superior *cava*. 4. Diseased state of the lungs, not admitting the blood to pass readily through them from the right side of the heart. 5. Long holding of the breath, as in making great muscular efforts, and blowing wind-instruments. All these causes must induce a temporary stagnation of the blood in the vessels of the brain, as they evidently do in the external parts of the head and neck; and upon this stagnation, or interruption of the circulation in the brain, the suspension of functions depends. In general, this is of short duration, the effect ceasing as soon as the cause is removed. But on some occasions, the arteries, from the difficulty met with in transmitting their blood into the veins, are incited to act with increased force, and a rupture of vessels is the consequence. The

plexus choroides has thus often given way; and where the effusion of blood is considerable, the termination may be immediately fatal; if less, a recovery must necessarily be very slow, if it ever takes place, which is indeed rarely to be expected.

5, 6. *Narcotics*, as *alcohol*, and *opium*; and likewise the *inhalation* of certain noxious gases or vapours, as the *carbonic acid gas*, and different animal effluvia; these have been supposed to act immediately upon the *nervous power, destroying* (as Dr. Cullen expresses it,) *its mobility*. Whether this is more probable than the opinion that they influence the sanguiferous system of the brain, in the manner mentioned, I shall not presume to determine. That they do, sooner or later, excite the vascular action of the brain, is shown by the fact before mentioned, namely, the throbbing head-ache, and other signs of increased circulation about the head, that are observed to attend or follow the operation of these causes. If it be true, as has been alleged, that these poisons destroy the irritability of muscles, and of the nerves connected with them, when both these are entirely separated from the body; the fact affords a strong confirmation of the opinion in question, namely, that they exert their primary influence upon the *nervous power*. I hardly need remark to you, that the expression of *destroying the mobility of the nervous power*, is objectionable, as being too hypothetical; since we know too little of the nature of the *nervous power* to warrant us in assigning to it so distinct a quality as *mobility*: but, as coming from such a man as Dr. Cullen, it is entitled to respect.

As to *flatulency of the stomach* inducing apoplexy, by compressing the *aorta descendens*, and thus determining a greater quantity of blood towards the brain, I am inclined to reject this notion as too mechanical; for I do not believe that any degree of pressure can be thus applied to the aorta, which will materially interrupt the course of the blood through it. That distention of the stomach may influence the brain by sympathy, so as to excite the vascular action of the latter, I should have no difficulty in conceiving. How the *gout* or *ischuria renalis* operate in inducing apoplexy, (supposing them really to have such an effect), I do not pretend to know. The effect of *extreme cold*, in inducing *stupor* or apoplectic symptoms, is equally obscure.

The effect produced on the brain by what is called *concussion*, or a sudden shock occasioned by either a blow or fall, is probably different at different times, though in general it seems to have been thought otherwise. Indeed, there is something mysterious in the opinions commonly entertained on this subject. It has been imagined, that the state of brain induced in this way by violence, was a state of debility, requiring excitation for its relief; accordingly, *stimulants* of various kinds, and *opium*, have been largely administered on these occasions; instead of *bloodletting*, as is usual in other injuries. That an indiscriminate practice of this kind is highly improper, I have not the least doubt. Inflammation, in greater or less degree, is an almost necessary consequence of any mechanical violence committed on the brain, as must be the case here: and that this is likely to be aggravated by such treatment, is very obvious. The suspension of functions that follows instantaneously a blow on the head, and which is often as quickly recovered from, must be attributed to the shock merely, without any injury to the texture of the organ. But the mischief is sometimes of a more serious kind; as may be conjectured from the duration of the symptoms. A rupture of the fibrous texture of the brain itself, and of its minuter vessels, (a *solution of continuity*, as it is technically called,) is the most probable, because an almost necessary, result of such injuries. Now if life should thus be immediately destroyed, no trace of the injury might be met with upon examination after death. If the injury thus done to the structure of the organ should be in a less degree, such, for instance, as is not incompatible with life, it might be long before the organ became again capable of performing its functions. And thus it is, that after such injuries, the *mental* faculties, as well as the *corporeal*, are often left in an impaired state, and continue so for a length of time, or even for life.

In many of these cases, the general circulation is undisturbed, the pulse beating nearly as in health. In others, it becomes feeble, and sometimes irregular, with general coldness of the body. This state, though attended with a suspension of the *proper* functions of the brain, and therefore coming within the definition of *apoplexy*, differs from ordinary cases of this disease, in respect to the condition in which the brain is placed in the two cases. In ordinary *apoplexy*, the circulation through the brain is interrupted from mechanical causes. In simple *concussion*, such as I have just described, there is no other impediment to the circulation, than that which arises from the inability of the vessels to act, from the injury done to the *nervous power*: the circulation is carried on too feebly to support the functions.

Now in this state of things, no purpose is to be answered by *bleeding*, except it be that of preventing the access of inflammation; and it is questionable whether it is required in general, even for such a purpose; for such a state of brain is not very likely to be followed by inflammation in any very active degree. But it does not follow that, be-

cause *bleeding* is not called for, an opposite mode of treatment, namely, the use of *stimulants* and *opiates*, would be proper, or even justifiable. Such remedies can have no tendency to relieve the injury the brain has sustained, in regard to its organisation; while they are calculated to favour the accession of inflammation, the almost necessary consequence of mechanical violence, and the thing the most to be dreaded.

7. *Acute inflammation of the brain* may be reckoned among the *remote* or *occasional causes* of apoplexy; and that whether it takes place in the form of *phrenitis*, *hydrocephalus*, or *idiopathic fever*. I do not allude here to the sudden and unexpected bursting of a blood-vessel in the brain, which sometimes occurs in those diseases, and proves immediately fatal; but to that gradual suspension and abolition of the *sensorial functions*, which take place towards the end in aggravated cases, and which are nearly alike in all of them. So that the last and fatal stage is similar in all. These states differ from ordinary apoplexy, by the combination of the symptoms of topical inflammation of the brain, with those of *pyrexia* or a febrile state of system, in addition to those of interrupted circulation in the brain. Accordingly, there is not simply a suspension or obliteration of the *sensorial* or proper functions of the brain, but more or less of disorder in them at the same time; while the existence of inflammation, as the *remote* cause of those symptoms, is proved by the pain in the head and throbbing of arteries, that take place in the beginning, and by the hot skin, furred tongue, and accelerated pulse, that generally continue throughout the disease.

Of the *Prognosis in Apoplexy*.—It is evident that the judgment we are to form in regard to the event in apoplexy, will be very different in different cases: not merely from the present violence of the attack, but according to the nature of the *remote cause* inducing it; which you should endeavour, therefore, by inquiry to ascertain.

Many of the *remote* or *occasional* causes, are temporary in their nature, or are capable of being removed. Such is the case with fracture and depression of the skull, and blood extravasated beneath; arterial distention; many of the impediments to the return of blood from the head; and narcotic substances, when not carried to too great an extent. In such, your *prognosis* will in general be favourable. In others, the cause is beyond our reach, and we are unable to control it. The cause remaining, it is to be feared the effect will remain also, as in the case of blood extravasated in the brain. In some, again, the cause is too obscure to enable us to form an opinion with regard to the event. Generally speaking, the *prognosis* you give should be qualified, and not absolute; because although you may be able to estimate the nature and force of the *occasional cause*, you cannot so easily judge of the injury the organ may have sustained, nor of the disposition there may be to disease afterwards.

As a matter of observation I may state, that apoplexy often terminates fatally, either immediately, or after a few hours; though the patient sometimes survives two or three days. If there is no abatement of symptoms within twenty-four hours; and, still more, if the symptoms go on increasing from hour to hour; the disease may be expected to terminate quickly in death. Sometimes, however, there is a perfect recovery; but there remains, in most cases, a strong tendency to recurrence, which, sooner or later, proves fatal. Many have a great number of slight attacks; but two or three severe ones generally prove fatal. Hence the notion commonly entertained, that the third attack of apoplexy always proves fatal; which however is not strictly true. A large proportion of apoplectic seizures end in palsy of one half of the body (*hemiplegia*). These are very rarely recovered from, except in a partial way.

The *prevention* and *treatment* of apoplexy are subjects of the greatest importance; but we must desist from proceeding further at present.

An Account of the Laws relating to Medicine, Surgery, and Pharmacy, in the United Kingdom; with Observations on the Rights, Privileges, Abuses, and Defects, in each Profession, proving the imperious necessity of further Enactment, for the consolidation of the various Charters and Statutes connected with these Professions, for rendering same more complete, and better adapted for the conservation of Public Health.

"This is not the cause of faction, or of party, but of every man in the Empire."

Though medicine was cultivated and practised for 1600 years before the Christian era, as we read in the 50th chapter of Genesis,* and its cultivators esteemed and venerated, monuments and statues being erected to perpetuate their memories, and the profession encouraged, studied, and practised by kings, princes, and pontiffs, the highest, wisest, and best of men; the first legislative enactment passed in England was in the third year of the reign of Henry VIII,

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* A.M. 2315.

A. D. 1511. The preamble set forth, "that great learning and experience were necessary for the cunning of physic and surgery; that illiterate and ignorant persons, as smiths, women, &c., boldly take on them great cures, to the high displeasure of God, great infamy of the faculty, and grievous hurt to the King's liege people, be it enacted, that no person in the city of London, or within seven miles thereof, shall practise as physician or surgeon, except he be first examined, approved, and admitted by the Bishop of London, and Dean of St. Paul's, calling to him or them four doctors of physic, and other persons expert in surgery, under the penalty of 5*l.* a month; and persons outside said city and suburbs, to be examined by the bishop of the diocese, and by his vicar general in his absence, calling to him or them such persons expert in said faculties of physic and surgery, as their discretion shall think convenient, and give their testimonial under their seal to him approved, under same penalty; provided this act shall not be in any way prejudicial to graduates of Oxford and Cambridge."

The next act was 5 Hen. VIII. c. 6, which exempted surgeons from ward and parish offices. The Royal College of Physicians in London was incorporated in 1518, by the 10 Hen. VIII. c. 6, and confirmed by 14 and 15 Hen. VIII. c. 5, A. D. 1522, which enacted, that the charter was hereby confirmed, that Thomas Linacre John Chambre, and Ferdinand de Victoria, the king's physicians, and all other men of the same faculty within the city of London, and seven miles thereof, had been incorporated into one body and perpetual commonality or fellowship of the faculty of physic, are to have perpetual succession and common seal; that said faculty are to choose annually a president of said fellowship, to oversee, rule, and govern same, and all men of said faculty, with divers other liberties and privileges to them granted, to have abilities to purchase lands and make ordinances. Eight of the chiefs of the College to be called elects, who, from among themselves, are to choose a president yearly. All physicians through England are to be examined and approved of by such president and three of the elects, GRADUATES OF OXFORD AND CAMBRIDGE EXCEPTED. None however to be allowed to practise physic, unless persons that are profound, sad, discreet, groundedly learned, and deeply studied in physic. By 32 Hen. VIII. c. 40, the president, commons, and fellows of physicians and surgeons of London are exempt from ward and parish offices, and any physician in said city may practise surgery; four physicians are to be chosen from the College to search apothecaries' wares, under a fine of 40s. each if they refuse to act; and any one refusing to be searched, is to forfeit 5*l.* These acts were further confirmed by Mary, sess. 2, and the president of the College empowered "to commit offenders to any prison in London, except the Tower; and all justices, mayors, sheriffs, bailiffs, and constables, are to aid and assist the said president." Pursuant to 34 and 35 Hen. VIII. any person having knowledge of herbs, may minister to any outward sore or disease. By 14 Geo. III. c. 49, five fellows of the College of Physicians may grant licenses to lunatic houses, one to each annually, but no such person or commissioner to keep such house under a penalty of 50*l.* This act was made perpetual by 26 Geo. III. c. 91, which enacts, "that any person confining more than one lunatic in any one house, without license, shall forfeit 500*l.* It appears, then, that every man who had been examined and approved of by the president and elects, and their successors, was, *ipso facto*, a member of said corporation, and was thereby entitled to all the privileges and immunities that had been, or ever should be granted to said corporation. Such was the obvious intent and meaning of the acts of Henry VIII. The College, however, in despite of all acts and charters, now consist of fellows and licentiates; the former, with all the privileges and immunities, enjoy all the places of honour, profit, and trust, with a power of making laws for their own body; the latter, though having the same rights by law, as one body, are excluded from the privileges, which the president and fellows enjoy, by the same grants, from the same kings and parliaments. There was no distinction, no licentiate, from 1522 to 1575, though, at present, there are several classes in this corporation. 1st. President, fellows, and elects; 2d. Graduates of Oxford and Cambridge, who are licensed to practise by the College in the city and suburbs, during their respective periods of probation, previous to becoming fellows; they must be doctors, and re-examined, (contrary to law,) and, at the end of one year, are capable of becoming fellows; bachelors of physic are inceptor candidates, when they aspire to the fellowship; 3d. Medical graduates of Oxford and Cambridge; 4th. Licentiates who are admitted by the College to practise in and about London, and extra licentiates who may practise in the country, but not within the privileged district of the College.* Oh, Sancte Jupiter, what a perversion, what an infringement on the law of the land, and this, too, in the city of London, where a PEEL resides.

In confirmation of these abuses, I shall

* Elements of Medical Jurisprudence, by Paris and Fonblanque, 1823.

quote the opinions of some of the best judges in England. Thus in the year 1688, the College of Physicians of London was admonished, by Chancellor Jeffries, on account of subverting the original intent of their foundation. The College was again censured, 1700, by Chancellor Somers. In 1768, Lord Chief Justice Mansfield cautioned the College "against narrowing their grounds of admission so much, that if a Boerhaave should be resident here, he would not be admitted into their fellowship, though they are bound to admit every person whom, upon examination they think fit, according to the Charter; AND SUCH PERSON HAS A RIGHT TO BE ADMITTED INTO THE FELLOWSHIP."

Mr. Justice Ashton examined all the statutes, and was of opinion, "That the distinction made between the members of this Corporation, owes its foundation to an illegal act of the College itself, by arrogating a power to admit or refuse at their own free will; whereas they are *obliged to admit persons who have proved their abilities*, it being for the good of the community." So late as 1797 and 1800, licentiates who presented themselves for examination for the fellowship, were refused. For a further exposition of the abuses of this College, the reader will consult with advantage the Edinburgh Medical and Surgical Journal, 1818, Vol. XIV. As the law now stands, a diploma or degree from a Scotch, Irish, or foreign university, cannot entitle the holder to practise physic in England; for all persons in that country must comply with the acts of Henry VIII; this was laid down by Lord Mansfield, Smith v. Taylor, 1 Bos. and Pul. N. Rep. 106; also Middleton v. Hughes, tried at Guildhall, 1806; while Serjeant Williams was of opinion, that the College of Physicians could not fine, on which they seem to act.* Then what a hardship and injustice, that the majority of the English graduates in medicine, who have qualified in the justly famed school of Edinburgh, can be restrained from practising, unless re-examined in London. The various branches of medicine are taught at present from the same works, both national and foreign; in England, Scotland, and Ireland, the physicians of each part of the empire entertain precisely the same opinions as to the nature and treatment of diseases; the three countries were distinct nations when the English acts above cited were passed, but now happily united into one kingdom: hence the injustice and anomaly in restraining regular graduates in medicine of one part of such dominions from practising in another. It is now more advantageous for the Scotch and Irish physicians to settle in England since the Unions, and hence the absurdity of the existing laws in preventing them, while quacks of every sort abound in London, and beard the College of Physicians with impunity. Throughout the vast continents of Europe and America, Great Britain alone excepted, no person is allowed to practise any branch of medicine unless duly qualified, while in these countries, "quackery has been found to destroy more than the sword, famine, and pestilence united." It has been universally conceded, that of all the temporal blessings that man can enjoy, there is nothing to be compared to health, "it is above all gold and treasure," hence the importance of medicine. How preposterous to suppose, that a science the most extensive and difficult that can occupy the human mind, and requiring the greatest learning, study, and observation, can be attempted by the most illiterate persons in society; by men ignorant of the structure, uses, and derangements of the most complicated machine ever formed—the body of man. As well might a lowly workman cast an artist's glance over the vastness of the most magnificent temple, and rise to its sublimity, as one who has not regularly studied the godlike science of giving life and health to man, comprehend the exquisite grandeur and harmony in the arrangement, functions and conservation of the human body. Indeed the College of Physicians in London was founded for the express purpose of suppressing quackery, which they have most shamefully neglected, though they have been very ready to punish surgeons, medical graduates of foreign and even national universities, who settled amongst them.

Profession of Surgery in England.

This subject has been most ably discussed in THE LANCET duri.g the last year, and therefore I shall only recapitulate the acts relating to it. The first charter given to surgeons, was 1 Edw. IV., next 15 Hen. VII. then the Act 3 Hen. VIII. c. 2, by which surgeons were to be examined as physicians under same penalties; and by 5 Hen. VIII. c. 6, surgeons to be exempt from bearing arms, acting as jurors, &c. By 32 Hen. VIII. c. 40, A. D. 1540, barbers and surgeons were incorporated, the surgeons to have annually four condemned felons for anatomies. The barbers in London, or within one mile thereof, not to use surgery, or let blood, drawing of teeth excepted: any one may retain a surgeon or barber as a servant in his house."

The Charters 2 James I. and 5 Charles I. were the next extended to surgeons; then

* Edinburgh Medical and Surgical Journal, 1820, Vol. XVI.

came the act 18 Geo. II. A.D. 1745, by which the surgeons were separated from barbers, and made a distinct corporation, to enjoy all the privileges as by former grants and acts, to practise in every part of his Majesty's dominions, to be exempt from all duties of attending juries, &c. while in actual practice.* This Act ceased in 1797, when the College succeeded in passing a Bill through the House of Commons, which was read twice in the Lords, but most ably censured by Lord Chancellor Thurlow and the Duke of Bedford. The present Charter was granted 40 Geo. III. 1800, and is as objectionable as the Act of 1797; it is not confirmed by law, and gives a complete monopoly to twenty persons, whose misrule, peculation, and various abuses, have been ably detailed in THE LANCET.

In 1818, the College introduced a Bill, which was severely censured by that profound legislator and improver of all anomalous statutes, Mr. Peel, "who said its object was not to provide well educated surgeons, but to obtain a greater sale for diplomas, and put more money into their pockets individually." Indeed so great are the abuses in this corporation, that a petition is now about to be presented to Parliament, from many of the most distinguished members in London, praying for a committee to inquire into the same. Should not the members of any of the legally constituted Colleges of Surgeons of the united empire, have equal rights and privileges in the same dominions?

Pharmacy in England.

In 1606, apothecaries and grocers were incorporated by 4 James I, but this union was dissolved in 1615, by charter, 13 same reign, which prevented Catholics from practising physic or pharmacy in England. This charter is confirmed (except as therein stated,) by the Act 55 Geo. III, c. 194, 1815, which was amended by 6 Geo. IV. 1825, an Act that continued but one year in force. The 55 Geo. III., now in force, is highly objectionable in many respects, for example, it commands the apothecary to keep none but wholesome drugs in his shop, so that all the active vegetable and mineral poisons, though highly efficacious in proper quantities, ought to be excluded; and yet there is a large fine, if any medicine in use, ordered by a physician, be not in the shop of the apothecary. Again, any man putting the words chemist or druggist, over his door, can act as apothecary with impunity; and still this Act is a paragon of perfection in comparison to the Irish Apothecaries Act, 31 Geo. III. c. 54, which in fact is a dead letter, for in that happy and well governed country, there are more irregular than regular apothecaries. In England the apothecaries must attend lectures on medicine and surgery, and hence called surgeon-apothecaries; they are the physicians of nine-tenths of the population, which in Ireland they practise to the same extent, without ever attending any lectures on either subject: the mistakes of these men are really frightful and most extensive. Some of them attend lectures on midwifery, and then practise every branch of medicine. They generally attend in the most dangerous cases, and prescribe a variety of medicines, and after many days, when death stares them, they recommend that proper medical aid may be resorted to; the patients generally die, and all blame is ascribed to the physician, and none to the apothecary. Again, these men are constantly out prescribing, and their shops left to the care of schoolboys, who make the most fatal mistakes. There is no inspection of such shops in the provinces, and hence the most inert and useless medicines are daily compounded for the most fatal cases. The 55 Geo. III. ought to be amended, and extended to Ireland.

Profession of Medicine in Scotland.

The Universities and College of Physicians of Scotland are corporations not confirmed by law, and some of them, until the present year, liable to the most serious objections. However, the disgraceful traffic of degrees is at length terminated. Since the union of Scotland and England, the graduates of the latter are admitted on the same terms as the former, into the Edinburgh College of Physicians; but the London College act more selfishly, and exclude their brethren in North Britain. Any regular university graduate in medicine of the British dominions will be admitted without any re-examination or payment of fees into the Edinburgh College of Physicians.

The Edinburgh College of Surgeons was incorporated 1505, and erected into a College 1778, and confirmed by sundry acts of Parliament; they have power to grant diplomas for surgery and pharmacy, and entitle persons to practise same throughout the United Kingdom. The 31 and 55 Geo. III. confine their diploma, as to pharmacy, to Scotland. Mr. Butler, proprietor of the Medical Hall, Dublin, who complied with the English act, was prosecuted by the Apothecaries' Hall, Dublin, 1818, and fined.

Profession of Medicine in Ireland.

The College of Physicians of Dublin was incorporated by Charles II. 1667, and confirmed by 3 Will. and Mary, 1691, which

* By 7 Geo. IV. 1826, Mr. Peel's Jury Bill, medical men are exempt from attending as jurors, while in actual practice.

empowered said College, "to restrain all persons from practising physic in Dublin unless duly licensed by this body." This charter has not acquired any legal validity, though frequently solicited. By 1 Geo. III. c. 3, 1761, the College was empowered to enlarge their number, and admit four learned Doctors into the fellowship of their body; to appoint inspectors of apothecaries' shops in Dublin, and to frame a pharmacopœia. By 7 Geo. III. c. 8, 1767, "no person to be physician to county hospitals, unless certified and examined by the College." This is a dead letter, as there are no physicians appointed as yet to county hospitals. By 25 Geo. III. c. 42, and 31 Geo. III., the College is empowered to elect the members of a school of physic, to consist of three or four professors, called the professors upon the foundation of Sir Patrick Dunn, M. D., and to appoint clinical lectures to be delivered in Dublin. The 5, 6, 7, 8, 13, 14, 15, and 16 Geo. III., are Acts authorising the establishment and erection of several county hospitals in Ireland. By 36 Geo. III. c. 9, the governors of infirmaries can compel their treasurer to account, by a petition, to the Courts of Chancery or Exchequer; and no surgeon can be appointed to any county hospital or infirmary in Ireland, unless licensed by the Irish College of Surgeons. 45 Geo. III. c. 91, empowers grand juires to present specified sums for the various hospitals in Ireland, and power is given to found dispensaries, that each person, paying one guinea, is an annual subscriber from time of payment; that all the subscribers are to appoint a committee of five persons, at any quarterly meeting, and a treasurer, who shall make oath, and furnish his account of subscriptions on a proper stamp, at the next Assizes, when the grand jury can grant the same sum, to be expended in procuring medicine, medical or surgical aid for the poor of such district. By 54 Geo. III. c. 112, and 53 Geo. III. c. 47, treasurers of infirmaries, dispensaries, and fever hospitals, are entitled to receive assize grants, to make proper affidavit in cases of dispensary accounts, and to pay surgeons of fever hospitals; for there is no appointment of physicians to such institutions by this Act. The last Act is 4 Geo. IV. c. 43, which regulates a most paltry stipend for medical and surgical attendances on gaols in Ireland.

It is evident then, that the Dublin College of Physicians have no legal authority to restrain improper persons from practising medicine in Ireland. They re-examine those persons approved of by *their own school of physic*, imitating the laudable example of London. They publish an annual list of their own members in the newspapers, and have the effrontery to state, there are no other regular practitioners in the country, though three-fourths of the faculty in that country are regular Edinburgh graduates. For an exposition of the abuses in the medical profession in Ireland, see Report of the Dublin College of Physicians, in the Edinburgh Medical Journal 1808, Vol. III; also Dr. Grattan's Remarks, 1821; also the many valuable Papers of Erinensis, published in The Lancet, Vol. X. 1826. Physicians of the Catholic persuasion, although very numerous, are excluded from all places of rank, profit, or distinction in Ireland.

Profession of Surgery in Ireland.

By 24 Geo. III. 1784, the College of Surgeons was incorporated. The only privilege the members have is that of attending infirmaries. Like the London College, the greatest abuses exist here; the whole property of the profession is vested in the hands of a few hospital surgeons, not more than a dozen. These men have from 20 to 40 apprentices each, who pay immense fees, 150*l.* as an out-door and 300*l.* as an in-door *apprentice*, while the great body of the College, not having hospitals, have no trade in this way; and some masters are so negligent that they never concern themselves about a pupil from the date of his indenture to its expiration; he may or may not attend his studies, as he pleases. A London surgeon can be appointed to the large hospitals in England and Scotland, but not to the smaller ones in Ireland. One would think that the play of All in the Wrong is ever to be performed in the affairs of Ireland.

I subjoin the form of a bill* that would remove all defects in the laws relating to medicine:—

1st. That the English University graduates, being free from re-examination by the London College of Physicians, that the like exemption be extended to all regular British and Irish University graduates, who ought to have equal rights, &c., and be admissible into the respective Colleges of Physicians on presenting their degrees and paying *moderate fees*, and be entitled to all privileges.

2nd. That each College of Physicians and Surgeons do form a national Council, to whose decision all differences in medical or surgical evidence be submitted, and the certificate of the officers of same, under hand and seal, be received as legal evidence on the subject.

3d. That Members of the Colleges of Surgeons do have equal rights; that they, and Army and Navy Surgeons, may open shops for the sale of drugs, as general practitioners.

* We do not approve of this Bill.—Ed. L.

4th. That some tribunal be appointed for examining all persons in midwifery, who intend to practise same, as solicited by the Obstetric Society of London.

5th. That no person shall practise medicine, surgery, midwifery, or pharmacy, unless duly qualified, except those now in practice, under certain penalties.

6th. That apothecaries and surgeon-apothecaries have moderate fees, to be regulated by statutes; and that some such regulation be made with respect to physicians and surgeons.

7th. That the English Apothecaries Act be amended, and extended to Ireland, and that dentists, aurists, &c., be examined by the Colleges of Surgeons.

8th. That county hospitals, fever hospitals, dispensaries, lunatic asylums, prisons, houses of industry, be attended in Ireland by physicians, surgeons, and apothecaries, when same can be had, and physicians to have same fees as surgeons.

9th. That fair compensation be allowed physicians and surgeons for attending coroners' inquests in Ireland; at present there being no fee whatever.

10th. That this Bill be extended to every part of his Majesty's dominions, and that the penalties in same be recoverable in a summary manner before magistrates; and that physicians be enabled to recover fees, whether there be any promise or not.

This would be the Magna Charta of Physicians, and is a subject well worthy of the attention of the Right Hon. Mr. Peel, the improver of all obsolete statutes.

HYGEIAPHILOS.

March 28th, 1827.

FOREIGN DEPARTMENT.

ANATOMY.

Additional Notes to M. Jacobson's Paper, by M. Breschet, Chef des Travaux Anatomiques de la Faculté de Medecine de Paris,† &c.*

SINCE the labours of M. Jacobson, many anatomists have investigated the same part of the nervous system, and the results of their investigations presenting some differences, I thought it of advantage to give here a short analysis of the principal researches undertaken on this point of anatomy, in order to make known to my readers the state of the science up to this day. I have myself made a great number of preparations which have been, for the most part, placed in the museum of the Faculty, and I propose to publish forthwith a small pamphlet, on some parts of the internal ear, with what my dissections have learnt me, and what anatomists had not hitherto, or but very imperfectly, indicated.

A little before the researches of M. Jacobson, M. Ribes was occupied in the same kind of researches, and this skilful anatomist discovered a nervous filament of the sympathetic penetrate into the globe of the eye with the central artery of the retina, and another branch of the sympathetic go to the ciliary ganglion. According to M. Ribes, the chorda tympani does not unite with the lingual branch of the 5th pair; but if it is situated in the sheath of this nerve, it divides inferiorily into two branches, one of which goes to the maxillary ganglion and the other loses itself in the substance of the tongue.*

Afterwards M. Ribes wrote on the same subject, and he appeared to raise doubts on the existence of the anastomosis discovered by M. Jacobson in the cavity of the tympanum; that is to say, his dissections have not been able to show him these nervous communications.

Bock, in a monagraph on the 5th pair, which can only be compared to the labours of F. H. Meckel, sen., has succeeded, after numerous researches and many preparations, to discover and demonstrate the connexion of the great sympathetic with the greater number of the cerebral nerves.

1st, With the 5th pair. *a*, by the Gasserian ganglion, which is united to the great sympathetic by very thin filaments—*b*, by the carotid ganglion, which communicates with the first branch of the 5th pair—*c*, by the same ganglion, which sends two filaments to the ciliary ganglion—*d*, by the vidian nerve, and this is the deep branch which communicates with the great sympathetic. Besides the naso-palatine nerves, there goes from the naso-palatine ganglion a filament, which is united to the 6th pair, and to the septum narium, which is lost in the naso-palatine ganglion.—*e*. A nervous branch of the plexus mollis of the great sympathetic is united also with the maxillary ganglion of the lingual branch of the 5th pair.

2. The great sympathetic communicates by many filaments with the 3d pair.

3. The small ganglion of the glosso-pharyngeal nerve communicates with the great sympathetic and with the facial nerve.

4. A communication exists also between the superior cervical ganglion and the pneumogastric nerve (par vagum).

* Vide LANCET of last week, p. 68.

† Repertoire d'Anatomie, tome ii. n. 2.

* Memoire de la Société Médicale d'Emulation. Paris, 1811.

5. There is very seldom found a communication between the great sympathetic and the hypoglossal nerve.

6. Lastly, there goes from the carotid ganglion a small filament, which is distributed to the pituitary membrane.*

Bock, in Pierer's Dictionary of Anatomy, in describing the glosso-pharyngeal nerve, says that this nerve, at its exit through the foramen lacerum posticum, is situated before the jugular vein, that there it dilates and forms a small oblong ganglion, (ganglion petrosum,) situated in a depression of the petrous portion of the temporal bone; that from this ganglion there proceeds first a small filament which goes behind, by a separate canal, under the promontory, into the cavity of the tympanum, where it bifurcates into two small branches. One of these goes into a sulcus behind the promontory, and gets by another small canal, either to the petrous branch of the vidian nerve, or to the trunk of the facial nerve; but it sends at first a filament to the foramen rotundum, and into the cavity of the tympanum. The other small branch goes behind to the promontory, and unites with the filaments of the great sympathetic, at its departure from the carotid canal, &c.†

C. G. Wutzer, who attended my lectures on operative medicine, has equally studied the connexions of the great sympathetic with the filaments of the small ganglion of the glosso-pharyngeal nerve. He affirms, that he never met any communication between this ganglion and the 8th pair. The small ganglion described by Andersch, and which, according to him, is generally to be found on the deep temporal artery, has never been observed by M. Wutzer.‡

M. H. Cloquet says, that immediately at its departure from the cranium, the glosso-pharyngeal nerve distributes one of its ramifications into the auditory canal; that it sends another on the promontory of the tympanum, to go, after having penetrated into this cavity by an open groove, near the stylo-mastoid foramen, to anastomose with the branches of the superficial petrous filament of the vidian nerve; then it receives a filament which comes from the stylo-mastoid branch of the facial nerve, and another which is sent by the 8th pair to it. Then it furnishes two long and thin filaments, which descend on the internal carotid artery, allowing many filaments in their course to escape, which go to anastomose with the pharyngeal nerve of the 8th pair.* This description differs in some points of view from that of M. Jacobson, with whose researches M. H. Cloquet was acquainted; and this difference proves that M. H. Cloquet, in adopting the anastomosis, found by the Danish anatomist, has, notwithstanding, found the parts arranged in rather a different manner. He does not speak of the ganglion of the glosso-pharyngeal nerve; does he hold in this respect the opinion of Bichat, who contested the existence of it?

M. Kilian, who has occupied himself very much with the study of the glosso-pharyngeal nerve, and who has published on this subject a very interesting monograph, assured me latterly, that he had never met with the nervous anastomosis indicated by M. Jacobson, an anastomosis which, as we have just seen, unites the superficial branch of the vidian nerve, the ganglion of the glosso-pharyngeal nerve with the great sympathetic. According to this Russian† physician, there proceeds from the ganglion of the glosso-pharyngeal nerve a small filament, which finds its way into the petrous portion of the temporal bone, and there loses itself. Sometimes, however, he has been able to follow this filament up to the cavity of the tympanum, where it ends, after having divided into two small branches. I do not think that nerves can penetrate bones to be lost in them; the nervous filaments do not proceed in this manner, even those of the great sympathetic, which only penetrate the different organs accompanying arteries, and afterwards uniting with them. If M. Kilian had seen at one time the nervous branches lose themselves in the bony substance, and at another traverse it, we should believe, that in the first case the dissection had been less successful, and that by its difficulty it has not been practicable to follow up the nerve to the cavity of the tympanum. M. Kilian said, that it *must* sometimes happen, that the filaments of the great sympathetic penetrate into the petrous portion, without going to be connected with the other nerves. If M. Kilian had affirmed that he *saw* this disposition, I should believe him; but as he says only that it *must*

* C. A. Bock, Beschreibung des fünften Nervenpaares und seiner Verbindungen mit andern Nerven, vorzüglich mit dem Gangliensystem. Meissen, 1817. Voy. aussi Hirzel, Journal de Tiedemann, vol. 1, chap. 2, page 203.

† Voy. Bock, dans le Dictionnaire Anatomico-Phisiologique de Pierer, vol. III.

‡ C. G. Wutzur, de corporis humani ganglionum fabricâ atque usu. Cum tab. æneis. Berolini, 1817.

* Traité d'Anat. Descript. 3e edit., tom. ii. pag. 126. Paris, 1824.

† H. F. Kilian, Anatomische Untersuchungen über das neunte Hirn. Nervenpaar. Pesth, 1822.

happen, I think that then the anatomist has not been sufficiently successful in following the nervous branch up to its termination.

I am indebted to the kindness of Dr. Ehrmann, "Chef des travaux anatomiques de la Faculté de Medecine de Strasbourg," for some interesting details on the distribution of the nervous filaments, known under the name of Jacobson's branch (from the glosso-pharyngeal). In the note which he sent me, and which was composed, according to a preparation which is placed in the Museum of Strasburg, it is stated that this branch, coming from the petrous ganglion, lodged in the triangular fossa, at the inferior surface of the petrous portion, enters into a separate canal through the substance of the bone, ascends as high as the promontory, where it divides into three distinct filaments, each being covered by a thin plate of bone. The first of these filaments perforates the bone to get to the carotid canals, where it anastomoses with the nervous plexus that surrounds the internal carotid artery; the second goes to the membrane of the fenestra rotunda, on which it is lost; the third is the strongest, it proceeds so far as the superior surface of the petrous portion, where it communicates in an acute angle with the superior branch of the vidian nerve.

There results from the researches of M. Lobstein, that the great sympathetic anastomoses with filaments of the 6th pair, and with the deep branch of the vidian nerve; that there exists, moreover, an anastomosis between the superficial branch of the vidian nerve, the glosso-pharyngeal and the great sympathetic. This anatomist admits then, the anastomosis of Jacobson, whilst he doubts the existence of the numerous branches of communication between the sympathetic and the cerebral nerves, such as those that have been described by Fontana, Laumonier, Bock, and H. Cloquet.

M. Hirzel, élève of M. Tiedemann, conducted some researches under the eye of this celebrated professor, and every thing M. H. relates, appears to have been confirmed and adopted by his master. Thus we see that M. Tiedemann entertains no doubt as to the nervous communications discovered by M. Jacobson in the cavity of the tympanum, and admitted by M. Hirzel.*

Undoubtedly those communications must be regarded as frequent, which exist between the great sympathetic and the nervous cerebral system, the anastomosis described first by Jacobson, which takes place between the great sympathetic, the glosso-pharyngeal, and the superficial branch of the vidian nerve. Although this anastomosis has been described by all authors who have made investigations on the subject, such as Bock, Wutzer, Cloquet, Lobstein, and Ehrmann, with the exception of Kilian, who has denied without reason the nervous anastomosis of Jacobson; still there is such a difference in their descriptions, that it is surprising what vagueness exists on this anatomical point. The extraordinary delicate consistence of the nervous filaments, and their existence, concealed in the substance of the pyramid of the temporal bone, render the researches on this anastomosis of nerves very difficult, on which account the differences of opinion appear to us less astonishing.

As regards my own investigations, before passing to the description of the anastomotic filaments, I will briefly point out the openings and canals through which the nerves enter and traverse the temporal bone. In the middle of the anterior border of the foramen lacerum posticum, immediately behind the external parietes of the carotid canal, there exists a small fossa, fossila petrosa sive Vallecula Rosenmulleri, in which there is a minute opening going into a small canal, that proceeds backwards and upwards to the petrous portion of the temporal bone, to open at the posterior part of the surface of the cavity of the tympanum. From thence two other smaller canals proceed in different directions; the one going directly upwards above the promontory, curves forwards, and a little upwards, and opens into the aqueduct of Fallopius, the other traverses the most inferior part of the internal parietes of the cavity of the tympanum under the promontory from behind to before, and a little above, and pierces the posterior wall of the carotid canal towards its first inflection. On the internal part of the cavity of the tympanum, these small canals are covered by an extremely thin plate of bone. This lamella of bone must be raised before the smaller canals can be perceived. The glosso-pharyngeal nerve, at its passage across the most anterior part of the foramen lacerum posticum, contained in a sheath furnished by the dura mater, bifurcates, and forms a small oblong ganglion, called the petrous ganglion, which is situated in the small petrous fossa. From the anterior part of this ganglion, a branch arises (ramulus Jacobsonii) which proceeds into the small canal above mentioned; going at first from below to above and behind, it appears soon in the posterior and inferior part of the a

* Untersuchungen über die Verbindungen des sympathischen Nervens mit den Hirnnerven. Von doctor Leonhard Hirzel, aus Zürich. This article exists also under the form of a dissertation, "Dissertatio inauguralis Medica sistens nexus nervi sympathetici cum nervis cerebralibus," by the same author.—Ed. L.

vity of the tympanum. During its course in the small canal, the nerve is accompanied with a very minute blood-vessel, and surrounded with a very delicate sheath, which must be divided with great care, in order that the nervous nature of this filament may not be mistaken. After its entrance into the cavity of the tympanum, this nervous branch divides into three twigs, which proceed into the very small canals above mentioned.

The first leaves the trunk almost at a right angle, goes into the small canal under the promontory, from behind to before, and arrives at the carotid canal by the opening which exists at its posterior wall. There it anastomoses either with a filament of the carotid plexus, or with the filament proceeding from the superior cervical ganglion, which is inserted into the ganglion of Meckel. The second filament, which is in some degree the continuation of the trunk, mounts almost vertically along the internal parietes of the cavity of the tympanum above the promontory, where it sends a very delicate and small filament to the membrane of the fenestra ovalis and the stapes. This filament becomes then a little larger, it curves forwards and a little upwards, and, lastly, anastomoses with the superficial branch of the vidian nerve, close to where it rests against the facial nerve. The third filament goes then from the point of division from the small trunk, towards the fenestra rotunda, and is carried to the membrane of the fenestra ovalis. This disposition, agreeing with the description given by M. Ehrmann, the branch going to the fenestra ovalis has been found three times by M. Hirzel, namely, twice in adults, and once in a child of two years. In two other bodies, he discovered the following arrangement; the branch of Jacobson, proceeding from the ganglion of the glosso-pharyngeal nerve, goes into the small canal above mentioned, enters into the cavity of the tympanum, and is found in the most receding part of the internal parietes of this cavity. Thence having sent a small filament to the spot of the secondary tympanum,* it is directed from below to above, and from behind forwards to the promontory, there divides into two filaments, viz. a superior and an inferior. The inferior filament proceeds on the inferior part of the promontory, downwards and forwards, pierces the superior wall of the carotid canal, enters into this canal above the external part of the carotid artery, penetrates again across the inferior parietes of the canal, and is lost at the commencement of the cartilaginous portion of the Eustachian tube.

The superior filament goes to the surface of the promontory, upwards and backwards, and terminates in two very delicate filaments. The one goes even higher and more behind, and anastomoses with the superficial branch of the vidian nerve; the other descends on the promontory, and unites with it on the most anterior part of the cavity of the tympanum, with the inferior filament, whence comes a small common trunk, which is carried to the guttural tube. This nervous filament, which is accompanied by a very delicate artery, does not form any anastomosis in the carotid canal, but only traverses it to be distributed on the cartilaginous portion of the Eustachian tube. On a sixth subject, the branch of Jacobson divided on the promontory into two filaments: the superior filament, thinner, entered into the carotid canal, and united with the great sympathetic; the inferior, thicker, traversed the carotid canal, and was lost in the cartilaginous portion of the Eustachian tube. The anastomotic filaments, with the superficial branch of the vidian nerve, do not exist. It consequently results from the observations of M. Hirzel, that the ganglion of the glosso-pharyngeal nerve, anastomoses oftener with the petrous branch of the vidian nerve, and with the great sympathetic, and that these nerves proceed from this anastomosis, which ramify, in part, in the membrane that lines the cavity of the tympanum, in part, in the Eustachian tube. M. Hirzel finishes this description by stating that M. Kilian is wrong in saying that these nervous filaments belong to the bone; and, moreover, that there does not exist any anastomosis between the great sympathetic, the superficial branch of the vidian nerve, and the glosso-pharyngeal nerve; and, lastly, that he (M. Hirzel) had always found the true extremity of these nervous filaments. If M. Kilian had made his researches with more care and precision, he would not have denied this nervous anastomosis, nor have regarded it as a production of M. Jacobson's imagination. But when M. Jacobson said that this anastomosis is not subject to any deviations, M. Hirzel could not be of his opinion, because this anastomosis offers evidently many varieties in its disposition. Lastly, M. Hirzel remarks, that he never saw any immediate communication between the first cervical ganglion, and the trunk of the glosso-pharyngeal.

M. Tiedemann conceives that the humour contained in the organ of hearing, viz. the liquid inclosed in the vestibula, the semi-circular canals, and the turns of the cochlea, ought to be considered as the necessary medium for the propagation of sound, as far as the plexus of the auditory nerve.

* Membrane of the fenestra ovalis.

We have seen in the memoir of M. Hirzel, that the nervous filaments of the petrous ganglion of the glosso-pharyngeal nerve of the superior petrous nerve of the second branch of the fifth pair, and of the superior cervical ganglion of the great sympathetic, penetrate into the cavity of the tympanum, that they unite there, and send delicate filaments to the membrane of the fenestra ovalis (membrana tympani secundaria), to the fenestra rotunda and the Eustachian tube. The first filaments come sometimes even to the membrane which lines the vestibule, the semi-circular canals, and the cavity of the cochlea, and in which the internal auricular artery ramifies, which presides over the secretion of the tumours in the internal ear. If it were so, and it is not unlikely, although we cannot demonstate it because the filaments are so very thin, it may be admitted by analogy, that the secretion of the acoustic liquid is equally under the influence of the great sympathetic.*

After having described the chord of the tympanum, according to the views entertained on the course of this nerve by MM. H. Cloquet and Hirzel, M. Tiedemann declares that, according to him, the muscles which stretch the membrane of the tympanum are furnished by a branch of the sphenopalatine ganglion, which anastamoses with a nerve from the ganglion of the glossopharyngeal described by Jacobson, and with the great sympathetic. So as to judge by analogy with the other muscular organs which receive their nerves from the great sympathetic, it must be admitted, according to M. Tiedemann, that the action of the muscles of the cavity of the tympanum is automatic and involuntary, as had already been stated by M. G. R. Treveranus; and, under this point of view, he compares the movements which take place in the tympanum to those which the iris performs, the iris also receiving its nerves from the great sympathetic, as MM. Chaussier, Ribes, Hirzel, and Tiedemann have demonstrated.

M. Tiedemann claims the discovery of the anastamoses, for which Jacobson has the credit, in favour of Ehrenritter, professor of anatomy at Vienna, and he founds his opinion in this respect on a note inserted in the Medico-Chirurgical Gazette of Salzbourg, 1790, vol. iv. p. 319.

M. F. Arnold, in his numerous and minute dissections made on the human subject and on calves, has related, that in this last case, the ganglion of the glosso-pharyngeal nerve, whose existence has been denied without reason by M. Desmoulins, offers a disposition perfectly analogous to that which is observed in men, in point of structure, form, and size. There proceeds from this ganglion a large filament, which penetrates the fibrous tissue situated between the pyramid and the bulbous part of the temporal bone, enters into the cavity of the tympanum, and anastomoses with the filaments coming immediately from the ganglionary nerve, as well as with a branch coming from the ganglion of the pneumo-gastric nerve, forming a plexus like that which has been discovered and described by Jacobson in the human subject. From this plexus proceed filaments which go to the fenestra ovalis and to the foramen rotundum, as well as a very delicate branch which communicates with the correspondent chord going to the petrous nerve in man. The principal filament of this plexus proceeds to the tensor tympani, traverses it, and afterwards passes under the carotid plexus; after having gone under the plexus, it proceeds by the external side of the cartilaginous portion of the Eustachian tube, and terminates in the ganglion which is situated on the internal side of the third branch of the fifth pair.

In another part of his Memoir, Arnold says, that in man the superficial portion of the vidian nerve which, as most modern anatomists have related, and as he has proved, is formed, not by one filament, but by two, and even by a very great number of filaments, proceeds conjointly with several delicate branches of the plexus by which the carotid artery is surrounded, along the internal orifice of the aqueduct of Fallopius to the facial nerve, with which they unite. Anatomists are not agreed on this subject, viz. if the petrous nerve unites with the facial nerve, and whether the chord of the tympanum ought to be considered as a branch of this last nerve, as all the ancients and some moderns pretend, or whether this petrous nerve rests only against the second, and goes within its fibrous sheath up to the spot where it is detached in order to form the chorda tympani; M. H. Cloquet and M. Hirzel are of this opinion. M. Arnold has learnt from comparative anatomy, and minute researches made on man, that neither the one nor the other of these pretended dispositions is true. After his own researches, M. Arnold thinks that the petrous nerve anastomoses with filaments, and especially with the external filaments of the facial nerve, forms with them a kind of ganglion, of a greyish red colour, and of a soft consistence, precisely at the spot where the facial nerve is inclosed, that is to say, above the hiatus Fallopii, where the vidian nerve unites with the facial; so

* Ueber den Antheil des sympathischen Nervens an den Verrichtungen der Sinne, von Tiedemann, Zeitschrift für Physiologie. Erster Band. Heft. 2.

that this last nerve, at the beginning of the aqueduct of Fallopius, assumes a triangular form, the apex of which looks towards the internal orifice of this canal. This part, according to Arnold, ought to be regarded as a kind of ganglion, from which some very delicate branches come, part of which go to form :—

a. An anastomosis with the acoustic nerve, in the internal auditory canal, a little before the entrance of this nerve into the cavities of the labyrinth; a communication already found out by Kœlner, and which I have often discovered; but with dispositions rather different from those which M. Arnold assigns to it.—*b*. Communications with the carotid filaments of the great sympathetic.—*c*. Chorda tympani.—*d*. The communication with the glosso-pharyngeal, or one of the anastomoses of Jacobson. All these nervous communications are considered by M. F. Arnold as offering a great importance in physiological and pathological points of view, and from the connexion of the great sympathetic nerve with the facial and auditory nerves, a point hitherto admitted only by analogy, it seems to him proved by demonstration, viz. that the nutrition of all parts of the labyrinth, as well as the secretion of the humour contained in this cavity, humour so indispensably necessary to hearing, is found under the influence of the great sympathetic. Up to this time the connexion of this nerve with the portio mollis of the seventh pair not having been demonstrated, in order to find the part which the ganglionary nerve takes in hearing, recourse must be had to the admission of filaments coming from the plexus of M. Jacobson, plexus which should send branches into the labyrinth across the fenestra rotunda; and we have seen that M. Tiedemann had anticipated these communications, and that by them he had tried to explain the influence of the nerves of the organic life on the functions of hearing.*

Although I propose to describe with some care the disposition of all the nerves which are distributed in the internal ear, or which traverse the cavities in the petrous portion of the temporal bone, I will say a few words in advance on several of these nervous chords.

I have seen a great number of times the ganglionary dilatation formed by the glosso-pharyngeal nerve at its exit from the cranium. This ganglion is situated in a small depression, between the anterior part of the foramen lacerum posticum, and the inferior orifice of the aqueductus cochleæ. From this ganglion a filament proceeds, which, after taking a short course, penetrates into a canal, the orifice of which opens at the outer side of the inferior extremity of the aqueductus cochleæ. This opening is constant in its situation, and I am astonished that writers on osteology have not mentioned it, and that several anatomists have sought for the canals traversed by the filament of the glosso-pharyngeal nerve, which goes into the tympanum to form the anastomosis of Jacobson, in any other spot than quite close to the origin of the aqueductus cochleæ. To point out this orifice, as on the inferior surface of the petrous portion of the temporal bone, towards the point of the pyramid, is an admission of never having seen or dissected the part, or of mistaking one nervous filament for another. To take this orifice of the canal of the filament of the glosso-pharyngeal nerve going to form in the tympanum, the anastomosis of Jacobson, at the external part of the stylo-mastoid foramen, or the inferior orifice of the aqueduct of Fallopius, is to commit a very great mistake. I will say, on this point, that there constantly exists on the side of the stylo-mastoid foramen, two other openings of smaller diameter than that of the inferior orifice of the aqueduct of Fallopius; and that on the temporal bone of a fœtus, arrived at its full time, and on the heads of very young children, these three openings may be seen in the same line; but when the mastoid process develops itself, it covers the small external opening, which is only seen at a certain height, in the inferior part of the aqueduct of Fallopius. Cassebohm and Cotugno are the only anatomists who have said a few words on this arrangement, but neither recognised the true structure of these parts. There are then, on the side of each other, three curved canals, one of which for some time known, longer, and of a greater diameter than the others, forms the aqueduct of Fallopius; the second, situated between the stylo-mastoid foramen and the mastoid process, shorter, curved in its upper part, is both at its origin, as well as in the inferior part of its course, parallel to the first, then changes its direction, becomes nearly horizontal, and opens into the cavity of the tympanum; the third placed internally, and a little forwards, separated from the second by the stylo-mastoid foramen, is lost inferiorly with the aqueduct of Fallopius; shorter than the two others, it bends in half of its course, goes into the cavity of the

* Vid. Dissertatio inauguralis medica sistens observationes nonnullas neurologicas de parte cephalica nervi sympatheci in homine, F. Arnold, auctor. Heidelbergæ, 1826. Vid. also Zeitschrift für Physiologie, etc. Beschreibung des Kopftheils des sympathischen Nerven bei Kalb, nebst einigen Beobachtungen über diesen Theil bei Menschen. Von Doct. F. Arnold, p. 125. Zweiter Band, Heft I. Darmstadt, 1826.

tympanum, and there forms a projection which constitutes the pyramid. This canal contains a particular nervous filament which escapes at the top of the pyramid.

The chorda tympani is separated from the facial nerve in the fœtus and children, at a great distance above the stylo-mastoid foramen. This chord goes in the external canal, situated between the mastoid process and the stylo-mastoid foramen, and shut up in all its course in this separate canal, it is completely foreign to the aqueduct of Fallopius, external to which it is situated. It is easy to discover that the chorda tympani is very distinct from the filaments coming either from the vidian, as M. H. Cloquet thinks, or from the ganglion, formed by the vidian nerve, when it arrives on the curve described by the facial nerve, below the internal auditory meatus, and towards the hiatus Fallopii. It is astonishing that Cassebohm, who has marked the inferior orifice of this canal, has not followed this canal in all its course, and that he has never found that the promontory formed the superior extremity of a separate canal.

I have followed and dissected several times, in the cavity of the tympanum, the filaments of the glosso-pharyngeal, and their anastomoses, with the branches of the vidian nerve, and those of the great sympathetic. I have been able to follow these twigs coming from these anastomoses into the cavities of the labyrinth, across the fenestra rotunda and the fenestra ovalis, but I have often lost them on the fine membrane which lines these canals. I have also dissected the communication of the portio mollis with the portio dura, a little before their separation at the bottom of the meatus auditorius internus; and then, again, there is a small duct distinct from the canals of the labyrinth, which lodges a nervous filament; but I have not yet discovered the ganglion about which M. Arnold speaks.

I will conclude these observations by expressing my astonishment not to have found in the works of modern anatomists, and particularly in the papers of MM. Hirzel, Tiedemann, and Arnold, the disposition of several nervous chords belonging to the great sympathetic; coming from the inferior cervical ganglion ascending into the cranium through the canal in the transverse processes of the cervical vertebra, they follow the vertebral or posterior cerebral arteries. In their course they give off several filaments of anastomosis with the cervical ganglia and nerves, and at last terminate on the hollow in the basilar process of the occipital bone by anastomosing with the nerves which come from the spinal marrow. I have not been able, it is true, to find this disposition very distinct but in animals of high stature, and particularly the horse; still, many times I have only been able to follow these last branches up to the superior part of the cervical column, at that spot where the vertebral artery describes the curves to enter the cranium. I recollect to have shown these nervous communications to several French and foreign physicians, and to have dissected them in the presence of Dr. Cullen, who was for a long time my prosector, and who is at present teacher of anatomy at Edinburgh. I propose to resume forthwith all these researches, and to publish them at greater length.

PHYSIOLOGY.

*Experiments relating to the reproduction of the Crystalline lens, by MM. Cocteau and Leroy d'Etoille, Doctors of Physic. Account read at the Academy of Surgery, 10th Feb. 1825.**

In general, the means which nature employs is not often used to assist the loss which the eye receives by the extraction of the crystalline lens. Authors, for the most part, keep a profound silence on this subject; and those very few indeed, who have fixed their attention to this subject, positively deny the reproduction of the lens. Thus Haller, in his *Elementa Physiologiæ*, says, that the lens, being a solid, cannot, like the humours, regenerate itself; "lens cristallina fabricam sibi propriam solidam habeat neque humoribus debet accenseri, neque amissa renascitur."

The dissection of an eye deprived of its lens, says M. Tartra, presents remarkable appearances; at first, the depression of the vitreous body, which corresponds to the posterior segment of the lens, is not replaced by any new body; the vitreous humour fills the space which it occupies; the capsule of the lens does not exist, it is removed by absorption. (Thèse présentée au concours de 1811.) Already Tenon has announced this fact: Cristallini fossula ab humore vitreo in ejus locum secedente repletur. Wishing to know if the observations or the assertions of the authors cited are correct, we have practised experiments on different animals, and have obtained results quite different to those which they have announced. We will not examine if this difference is because the researches have been made on eyes operated on in a perfect state, whilst in the other they have been made on eyes operated on account of cataract; we will relate only the results of our experiments; their accuracy may easily be verified by similar trials.

MM. Cocteau and Leroy d'Etoille performed

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* Magendie's Journal de Physiologie, Jan. 1827.

six experiments, by extracting the lens; and, in all the cases, they found in one or the other eye, traces of formation of a new lens. We will give the sixth or last experiment, as these gentlemen have related it: "On the sixth of June, 1825, we performed the operation of cataract on the eyes of two rabbits. After the lapse of a month, both could see very well; but through some accident one was killed, without our having an opportunity of examining the eyes. The other was kept till the 18th of November, i. e. more than six months, when the examination of the eye was made in the presence of M. Fodera. The crystalline capsules were perfectly transparent, no cicatrix whatever could be observed; they contained lenses of a moderate size, and of as firm a consistence as those that we extracted. In order to acquire more certainty as to their nature, we plunged them into boiling water, and saw them immediately become opaque, hard, and friable, like the primitive lenses; merely the arrangement into bright lamellæ, was only evident in the eccentric lamellæ.

From the experiments which we have just mentioned, it evidently results that the lens may be reproduced. But this fact, not known, or forgotten up to this day, gives rise to other questions. That the lens is reproduced, is it necessary that the eye should be in a perfect state to the moment of extraction? The lens being removed on account of cataract, is it replaced by another? The persons who, after the operation for cataract, could see without the aid of convex glasses, do they owe this faculty to formation of a new lens? Will the lens continue to be classed among the living solids, or can this property of reproduction be likened to the other humours of the eye? We will content ourselves, at present, with proposing the questions, and will defer answering them till we have gathered sufficient facts to enable us to form an opinion.

To the Editor of THE LANCET.

SIR,—I beg leave, through the medium of your Journal, to return my thanks to the gentlemen who did me the honour to propose me, and also to those gentlemen who voted on my nomination, as a member of the LONDON PHRENOLOGICAL SOCIETY. For the present, however, and for reasons independent of the objects of that Society, to which I wish every possible success, I must decline my acceptance of the proffered favour.

I remain, Sir,
Your obedient servant,
JAMES PATY.

33, Bouverie Street, Fleet Street.

REVIEWS.

Instructions for collecting, preserving, and transporting such Specimens of Natural History as appertain to the Animal Kingdom; principally translated from the French. By JOHN CHICHESTER, M. D. 8vo. pp. 42. Matthews, Cheltenham, 1826.

A GREAT portion of this pamphlet is little more than a translation of a part of a set of instructions which were drawn up at the request of the French minister of Marine, by the professors forming the administration of the cabinet of natural history at the king's garden at Paris. They were originally printed by command of the French government, for the purpose of being distributed among the Governors of their Colonies, and commanders of ships, but have never been published for sale. The pamphlet treats,

1st. Of the manner of collecting and preserving specimens of natural history belonging to the animal kingdom.

2dly. Of the manner of packing them, so that they may reach their destination in the best possible state.

3dly. Of the form of notes which should accompany the different specimens.

4thly. Of the most desirable specimens, and the countries in which they are found.

Though necessarily concise, the instructions which the author has given are neither few nor unimportant; at a time, therefore, that the study of zoology is beginning to make some progress among us, the pamphlet cannot fail of being interesting.

Observations on the Impropriety of Men being employed in the business of Midwifery. 8vo. pp. 56. Hunt and Clark, 1826.

To betray an honourable confidence and a sacred trust, is, beyond doubt, the greatest of all enormities, and deserves the severest

reprobation and punishment. But acts of this die are, we apprehend, by no means frequent, at any rate to the extent of meriting the general censures of the very modest author of the pamphlet before us, which is a libel, not only on a respectable and useful body of men, (who, to use his own words, "have the *impudence* to write up accoucheur,") but a severe one on every woman in England! Not contenting himself with abusing the accoucheurs, he goes out of his way to libel, we should hope, the great, by declaring it his opinion, that "but for the kind offices of John the footman and Thomas the butler, the ancient house of ———, and the noble house of ———, would long since have been extinct." Moreover, "there are male ladies' corn-cutters, who cut ladies' corns at the moderate expense of half a guinea; male stay-makers—very valuable persons, who advertise to make stays so excellently, as to afford ladies comfortable support before and after accouchment, and counteract abdominal corpulency; and there are male bathers, &c. from which specimens, and from the rapid improvements in civilization, he does not despair, as he has not yet descended into the vale of years, of living to the time when male monthly nurses will be employed for all those ladies whose husbands have the means of paying for them!" Why the very judicious author has omitted to mention the musicians and dancing masters, who have occasionally played the deuce with young girls, we do not pretend to explain; but what have all these persons to do with the employment of medical men, at a time, too, when all the best sympathies of our natures are awakened, and when lust can no more find its account, than attraction and repulsion a settlement of their antipathies! "The *principal* part of the woman," says the worthy Knight, "has ceased to be attractive;" whence he very logically infers, that the lustful appetite of the doctor retains its full sway! He seems to be a very good specimen of the Clodius accusans mœchos; but it is to be hoped that no married or single folks will be found desirous of learning all the pretty things which the pamphlet is capable of teaching them, or of sanctioning the unfounded charges and vile insinuations which he has heaped on the general practitioners of medicine and surgery. The amative Oyster has ever shown himself the enemy of this most respectable class; but every one recollects the fable of the snake and the file, and will treat him with the contempt he deserves.

With respect to confiding the practice of midwifery to women, we know, for certain, that more debauchery is brought about by the few female practitioners in town, than can be effected by hundreds of lecherous male ones, were every woman inclined to favour their advances,—the probability of which no one, save the author of the pamphlet, will be inclined to admit.

Medical Botany, or Illustrations and Descriptions of the Medicinal Plants of the London, Edinburgh, and Dublin Pharmacopœias, with those lately introduced into Medical Practice. By JOHN STEPHENSON, M. D., and JAMES MORSS CHURCHILL, Esq. No. IV. April, 1827. Churchill, Leicester Square.

THE present monthly part contains plates and descriptions of the conium maculatum (common hemlock), the citrus aurantium (Seville orange), the olea Europea (European olive), and the anagallis arvensis, or scarlet pimpernel, executed in a very satisfactory and praiseworthy manner, such as must secure to its authors the patronage of the profession and the public.

ZOOLOGICAL SOCIETY.

On Wednesday last, Mr. Brookes delivered at the Society's rooms, Bruton Street, a lecture on the "Comparative Anatomy," or rather the Anatomy of the Ostrich. The apartment was quite thronged, and amongst the company we recognised several noblemen and professional gentlemen of distinction. Mr. Brookes elucidated the various parts of the lecture by preparations from his own museum; but the more immediate matter of it was furnished by the dissection of the splendid specimen presented by His Majesty to the Society. For perfection of stature and plumage, this bird surpasses those which are found in any other European collection.

UNIVERSITY OF GLASGOW.

Various reports are in circulation respecting the individual most likely to succeed to the vacant medical chair in this University. Some say that Sir Andrew Halliday, the author of the "Memoirs of the House of Hanover," will be appointed. Others say that the Professorship will be divided into the Theory and the Practice of Medicine. A Dr. Nimmo, a practitioner of some standing in Glasgow, will probably succeed to the former, and Dr. John Davy to the latter. Dr. Nimmo is to be recommended by his brother-in-law Mr. Gladstone, of Liverpool, the tried friend of Mr. Canning; and Dr. John Davy by the Chancellor of the University, through his brother Sir Humphrey. It is even said that Professor Burns wishes to exchange the surgical chair for the medical, and that if Dr. Cullen of Edinburgh do not succeed to either of the split professorships, and if Mr. Burns should, then Dr. Cullen will take the surgical chair. We shall probably be able to communicate something decisive on this subject very soon.

LONDON MEDICAL SOCIETY.

Dr. Haslam, *President, in the Chair.*

During the discussion which took place last Monday evening, Mr. Langstaff announced his intention of presenting to the Society a paper on the changes which the extremities of the nerves, vessels, and bone undergo on the face of an amputated stump; illustrated by preparations taken from his museum. He anticipated that his researches on this subject would tend to improve the present mode of amputating.

Some remarks were made on the frequency and treatment of intermittent fevers, by Drs. Shearman and Williams; Messrs. Field, Handey, Gossett, and others.

ST. MARY ABCHURCH,

Lombard-street.

On Thursday last, a Vestry was held in the church of the above parish to take into consideration a claim made upon the parish by Mr. Rees Price, surgeon, for attendance on paupers, and for which an action has been commenced against the parish officers.

The minutes of the former vestry, confirming the choice of officers, &c., having been agreed to, some discussion arose on the inhuman manner in which a poor woman, named Paisley, a resident in the parish for forty years, had been removed from her dwelling to the workhouse, while labouring under mortification in the bowels. This subject then dropped.

The next business was the consideration of Mr. Price's claim.

Mr. Palmer suggested, that it should be left to the reference of any gentlemen in the next ward.

Mr. Price said, the sum in dispute was but small; he however wished to establish a point for the good of the poor, and of security to the medical profession, that they should recover for attendance on paupers in case of need, without an order from the officers to attend. He would, therefore, try the question in a court of law.

Mr. Palmer repeated that Mr. Price had no claim.

After some further observations on the subject, Mr. Price closed the discussion by again stating his intention to prosecute the action.

The Vestry, after some other routine business had been disposed of, adjourned.

HOSPITAL OF WONDERS.

To the Editor of The Lancet.

Sir,—In perusing the surgical works of the late Mr. John Bell, I could not help being much struck with the similitude in the picture which he has given of the surgical practice of St. George's Hospital upwards of thirty years ago, with the brilliant delineation which you have lately given of that "*Hospital of Wonders!*" The following quotation is made from the edition of John Bell's works, lately published by his brother Mr. Charles Bell, Vol IV. p. 354.

I am, Sir,
Your obedient servant,
A Dresser of St. George's Hospital.

"What a sad picture is here," says he, "of the state of surgical practice at that time in one of the principal hospitals in London! The tumour compresses the humeral artery two-thirds of its length; the tumour itself is obstructed with coagula; the tumour loses its pulsation, and the blood ceases to pass through the artery. Then the pulse of the wrist becomes small and fluttering, it ceases at last, and yet the arm continues to live; the process of obliteration is slow, but it is so complete that the sides of the artery adhere, the arm survives this change in the circulation a whole month, perhaps more; and yet when the aneurism bursts, the surgeons allow the patient to expire from loss of blood! What is our profession good for, if we are to allow such a patient to die? If we refuse a patient those means which Nature has appointed for saving life? Surgeons and physicians, deliberating with absurd formality about inosculating arteries, might resolve thus to let the patient expire, but his honest and ignorant friends would not have done so; with common sense only to direct them, and full of the natural feelings of humanity, they would have judged that nothing worse could happen him than to die, and would no doubt have tried to stop the blood!"

Our Correspondent informs us, that two grand *spectacles* have been lately exhibited at this Hospital of Wonders. Mr. Brodie, it appears, has been performing the "Cæsarian section" for a *prolapsus ani*, and he has promised us a detailed account of the operation and dissection. The amputation of the boy's thigh will not be forgotten.

HOSPITAL REPORTS.

MEATH HOSPITAL,

AND

COUNTY OF DUBLIN INFIRMARY.

During the late epidemic, which proved so fatal among the lower classes of the population of Dublin, a great number of cases was brought to the Meath Hospital and County Infirmary, in all stages of the disease, affording to the medical officers of these institutions excellent opportunities of observing its character, and of improving its treatment. These opportunities were not lost sight of by Drs. Graves and Stokes, who have just published their "Clinical Reports"* of the most instructive cases which fell under their observation, of which we have been favoured with a copy. To the reports of the cases are added some good practical observations; an abstract of which, serving to show the character of the disorder, we shall insert. Rather too much attention seems to have been paid to "critical sweats," and in the recent cases of fever, it appears that evacuants, especially bloodletting, might have been carried farther with advantage. The following case is said by the reporters to present a good example of the *symptoms* and *progress* of the majority of the cases admitted during August, September, October, and early part of November, 1826:—

"December 14th, 1826. Mary Murphy, æt. 26, shoe-binder. Lives in High-street: there has been fever in the house; five days ill; commenced with rigors, followed by heat, headache, and general pains. At present complains of slight head-ache, great tenderness of epigastrium, nausea, and vomiting; sleeps very badly; no cough; skin

* Clinical Reports of the Medical Cases in the Meath Hospital and County of Dublin Infirmary, during the Session 1826, 1827. Part I. By R. J. Graves, M.D., and William Stokes, M.D. Physicians to the Hospital. Dublin, 1827.

not very hot; face not flushed; no suffusion of eyes; pulse 130; tongue dry, and brown in centre; moist at edges; costive; great thirst from commencement.—*Appr. hirudines* xx. *epigastrio, enema purgans.*—Dec. 15th. Had rigor at 10 p.m. yesterday, lasting for half an hour, and terminated by copious sweating, which continued until morning. Pulse 90; tongue moist; much cleaner; no tenderness of epigastrium.—*Enema purgans.* December 20th. Convalescent. Was discharged, and on 25th found herself again ill; was received into fever shed on 28th. Had soreness about umbilicus; constant vomiting; pulse 130; skin not very hot; tongue white; no head-ache; costive; leeches were applied to epigastrium.—December 30th. Nearly same state.—*Appr. vesicat. epigastrio enema purgans bis in die; haust. efferves. cum carbon. ammoniæ, et tinct. opii gtt.* v. *quater in die.*—December 31. Vomiting much diminished; sweated a good deal last night, preceded by shivering; pulse 94; blister rose well.—*Repr. haust. efferves.* The fever now disappeared, but she was much debilitated, and convalesed slowly."

"*Observations.*—In almost all, the crisis was preceded by a rigor, which was often severe, and varied in duration from a few minutes to half an hour, or even longer. In many epistaxis took place about the period of the crisis, often the day before, with much relief of the headache: the epistaxis was frequently copious, and generally preceded by a *dicrotous* pulse; so that when we observed this state of the pulse, we could, with tolerable confidence, predict the occurrence of epistaxis.* For a short time after the rigor all the symptoms used to undergo an exacerbation, and the patient resembled a person in the hot fit of the ague; but this state soon ended in copious sweating, and a remarkably rapid diminution of the febrile symptoms. In many cases the pulse fell from upwards of 100 to 70, or even to 60, and in four cases to 52, in the course of twelve hours. During the months above mentioned, three-day fevers were not less frequent than the five-day fevers, and both were almost in every instance followed by relapses. Sulphate of quinine, given immediately after the first crisis, did not prevent the occurrence of relapses. The apparent affinity of this type of fever with ague, suggested its employment: leeches applied to the epigastrium, or to the head, according to the predominance of tenderness of the epigastrium or headache, were found very useful; costiveness was obviated by purgative injections, and we had not very often occasion to use purgative medicines internally; the effervescing draught made with carbonate of ammonia and lemon juice, or a solution of tartaric acid,† occasionally, with the addition of a few drops of tincture of opium, was serviceable in allaying nausea and vomiting. When leeches to the epigastrium, and these draughts, failed to relieve the vomiting, a blister to the epigastrium often succeeded; fevers of longer duration, lasting sometimes even to the 14th or 17th day, were during the above months comparatively unfrequent, and were always severe. They had, however, many of the characters of the short fevers, such as epigastric tenderness, obstinate nausea, and vomiting, crisis by sweat, &c., but the crisis was not so decided, nor was it so often preceded by rigors; as will appear from the following cases, we used moderate venesection in many of the recent cases where re-action seemed violent, and any symptoms of local determination made their appearance. It must be confessed, however, that in *many* such cases, although the lancet had not been used, the crisis was not less complete. But as this was not always the case, and as local determination not unfrequently ended in real inflammation, it was thought most prudent to anticipate so dangerous a result by an early adoption of antiphlogistic measures. We have not found it necessary in cases of fever, where the head is much engaged, to practice *arteriotomy*; we prefer venesection, aided by the application of leeches to the head, to opening the temporal artery, which does not procure more relief, and is subject to more inconvenience, and occasionally even danger, as the necessary bandage often increases head-ache; and in persons debilitated by severe fever, hæmorrhage from sloughing occasionally occurs under the best management. We have very rarely judged it expedient to order the head to be shaved in fever; nor does the result of our practice lead us to regret our not having done so. We have seen many cases of deafness and ophthalmia, which could evidently be traced to this source; a circumstance not to be wondered at, since in most fever hospitals it is almost a matter of course to shave the head of a patient on his admission, and the patients are dismissed at so early a pe-

* Dicrotous pulse, as a prognostic of epistaxis, was first remarked by Solano, a Spanish physician.—See Dr. Nihell's Treatise on the Pulse.

† A solution of tartaric acid ʒiv ss. in water ʒviij. is equivalent to lemon juice. The following is the formula for the effervescing draughts with carbonate of ammoniæ:—℞ Carbon ammoniæ ʒi., aquæ ʒvi., syrupi croci ʒiij. Misce. Sumat cochlear ij., ampla, cum cochlear j., amp. succi limon, vel solutionis acidi tartaric. The syrup of saffron is not necessary in hospital practice.

riod of their convalescence, that the hair has grown but little, and the poverty of most is so great, that they cannot supply themselves with means of keeping the head warm."

"In the present epidemic, we have no hesitation in saying, that a great majority of the crises happened on some of the days pointed out by Hippocrates as critical days. It would appear that this coincidence is most remarkable in epidemics which, like the present, are attended with a well-marked crisis. At all events, it is only in cases where the crisis is well marked, that its date can be accurately ascertained. Convalescence in one of the cases was not perfect after the first crisis, because of the occurrence of bronchitis, which interfered with it. The stitch in the side which accompanied the bronchitis yielded readily to leeches; and if we may judge from the appearance of rheumatism in the arm on the following day, was probably rheumatic. The relapse was accompanied by pneumonia and bronchitis in right lung, to subdue which active antiphlogistic measures were successfully employed. The knowledge gained by the use of the stethoscope is of the greatest importance in fever. Fever often produces a hurried and laborious respiration, quite independant of pulmonary inflammation, and it is of the utmost consequence to be able to distinguish such cases from those where pectoral inflammation really exists. If this hurried and laborious respiration of fever be attended, as it often is, by a trifling bronchitis, producing cough, and more particularly if such symptoms occur at a late period, when the countenance so often assumes a purplish flush, is there not danger of confounding such cases with pulmonary inflammation? On the other hand, we have seen several cases of fever, in which the existence of pneumonia, not suspected during life, was only discovered by dissection; and we have in several cases succeeded in detecting pulmonary inflammation in fever by the aid of the stethoscope, when it existed in a latent form, without most or even any of its usual symptoms, and of course when its existence could not have been ascertained without the stethoscope. In a majority of the cases which occurred in the latter months of 1826, the serum and crassamentum did not separate at all. The solid parts of the blood, however, did not seem to be less in quantity than natural, for in the bleeding cups the whole presented a tolerably firm mass, every where in contact with the sides of the vessel. This took place in many cases, where the symptoms called for, and were relieved by, venesection; and we did not consider its occurrence as a contraindication to a further use of the lancet, when from other circumstances judged necessary."

"Bridget Bryan, ætat. 28.—December 13th.—Seven days ill; commenced with shivering, followed by heat and headache; got an emetic at commencement, since which has had tendency to vomit, slight tenderness of epigastrium; complains much of head-ache and pain of back; skin hot and dry; tongue moist; furred in centre; red at edges and tip; pulse 120; is very restless; no flushing of face, or suffusion of eyes. Several persons in same house ill of fever. Dec. 14th. Had a restless night; no sleep; severe head-ache; eyes not suffused; tongue covered with whitish paste-like fur in centre, with stripe of brown; inclined to be dry, except at edges, where it is moist and red. Pulse 120; skin hot and dry; great tenderness of epigastrium; no vomiting; ten weeks pregnant; had child at breast till a few days ago; severe pain in loins; lies on side. *Hirud. xx. epigastrio et haust. effervesc. cum carb. ammon.*—Dec. 15th. Tongue much cleaner and moister; tenderness of epigastrium diminished; pulse 84; is sweating at present; still complains of head-ache; was very restless and cold during night, until four A.M. when sweating commenced. *Sumat misturæ camphoræ* ʒi. *secunda quoque hora.*—Dec. 16th. Head-ache; is much annoyed by pains; thirst; pulse nearly 90, but tranquil; skin cool.—*Habeat potum tartari ad libitum.*—Dec. 17th. Pulse 84; convalescent.—Dec. 22d. At midnight got a shivering, followed by head-ache; 20 leeches were applied to head, and blister to stomach; pain was severe, and attended with soreness of epigastrium and vomiting; the blister rose well.—Dec. 26th. Had rigor last night, followed by copious sweat and sleep; finds herself better; but little head-ache; pulse 120; no vomiting; bowels free. *Hab. mist. diaphoret. sæpe in die.*—Dec. 30th. Pulse 90; tongue natural; has sweated several times since.—January 4th, 1827. Discharged cured."

"The epigastric tenderness, with nausea and vomiting, so common in this fever, seemed to be caused by inflammation of the mucous membrane of the stomach. In most of the fatal cases, this was found of a dark red colour and very soft, a condition evidently produced by violent inflammation. In others the redness was not so extensive, dark, or continuous; although we acknowledge, that in the present fever the above symptoms, depending on inflammation of the stomach, are very frequent, yet we have seen some cases where there was no evidence of any local inflammation whatsoever; and in others again, have observed that some other organ, as the *brain* or *lungs*, was the seat of inflammation, while the stomach

was free. We cannot subscribe therefore to the opinion, which supposes a local inflammation to be the root of all fevers, or to that which attributes their origin solely to inflammation of the mucous membrane of the stomach and alimentary canal. In our dissections, we have in some cases found the brain inflamed, in more cases the lungs, and still more some part of the digestive organs. We do not recollect to have found in one instance, out of very numerous dissections, a fatal case of fever which did not exhibit some serious local lesion of an inflammatory nature; so that while we deny, from our observation of cases during life, that fever necessarily implies local inflammation, dissection has convinced us that the occurrence of local inflammation during fever, is the general cause of its fatal termination. Let us here observe, that the latter inference is by no means contradictory of the former; for, in the fatal cases, accurate observation always detected, during life, the seat of the inflammation; so that in those cases which terminated favourably, and where no such symptoms existed, our inference that no local inflammation had been present, receives additional strength from our post-mortem examinations, for there we always found inflammation where we expected to find it; that is to say, we were always able to pronounce on its situation so far as to tell, before the body was opened, *in which cavity the inflammation would be found*.

"The *post-mortem* examinations have been always conducted by ourselves with the greatest care, and we generally spend between two and three hours in the examination of the body, being convinced that nothing has contributed to retard the advancement of medicine so much, as superficial post-mortem examinations. In examining the abdomen, we first note the general appearances of the intestines, and then take out the whole intestinal tube, which we slit up with an *enterotome* at its mesenteric attachment; this is done in order to avoid dividing any of the follicular patches or ulcerations in the small intestines, which are always situated at some distance from the mesenteric attachment. During this process, we examine the contents of the alimentary canal; and afterwards, having first carefully washed the mucous membrane, we remark its appearance throughout its whole extent from the stomach to the rectum. The morbid anatomy of the brain, the lungs, and the intestinal canal, has, within these very few years, received so many important additions, so much light has been thrown on this subject by more accurate investigations, that we would hesitate much in drawing any conclusions from the dissections of fever subjects recorded before this period. Indeed, we could prove that in most of even modern works on the pathology of fever, morbid appearances have been frequently mistaken, and more especially that many things, both in the brain, lungs, and alimentary canal, have been set down as morbid, which really are not so; consequently, conclusions, not at all justified by the state of the parts, have been drawn. Thus we hear of sanguineous congestion in the head, and morbid vascularity of the brain, intestines, &c., where the very accounts given contain internal evidence that these supposed morbid appearances had either no claim to that appellation, or resulted from changes which took place immediately before or after death. In fact, we look upon the morbid anatomy of fever as a subject which requires to be investigated almost *de novo*. Our assertion, that we have hitherto found evident lesions of vital organs in all the fever subjects we have dissected, is, we are aware, opposed to the recorded experience of many authors, who relate numerous cases in which no morbid alteration of any consequence could be detected. We question however, very much, the accuracy of such dissections; for, as has been well observed by Rostan, nothing is easier than to find nothing. We doubt whether such persons have injured medical science, more than those who have found too much."

These reports appear to have been drawn up with considerable ability and candour, and we shall probably revert to them next week, not having room for any more in the present Number.

ST. THOMAS'S HOSPITAL.

CASE OF CHOREA, UNRELIEVED BY THE PURGATIVE PLAN OF TREATMENT, CURED BY THE CARBONATE OF IRON.

A CHILD aged seven years, was admitted on the 15th of March, under the care of Dr. Elliotson. She had been affected with chorea ten weeks; the disease was universal, but the left side was more agitated than the right. She was said to be quiet during her sleep; the bowels were open, and the appetite good; she complained of violent head-ache, more particularly of the left side of the head, the pulse was 100. The The mother stated that the child had been an out patient of the London Hospital upwards of a month, and that during the whole of this period the child was very freely purged by medicine, almost daily, given for that purpose; the disease, however, was

not in the least relieved. Dr. Elliotson ordered two drachms of the subcarbonate of iron to be taken every six hours.

The report made upon this case on the 20th of March, states, there is much less agitation, the pain of the head is greatly relieved.

On the 30th of March, the amendment which had taken place was strikingly manifest; she could hold things in her hand, the agitation was only perceptible on speaking hastily to her; the pain in the head was entirely gone, and the general appearance of the child had greatly improved. The bowels were regular.

On the 8th of April she was perfectly free from disease; she had, up to that period, taken her medicine regularly.

Remarks—The foregoing case of chorea, is interesting in two points of view; first, that the patient had undergone daily purgation upwards of a month, without obtaining any benefit therefrom. And secondly, that when Dr. Elliotson commenced the exhibition of the carbonate of iron, *there was violent pain in the head*, which symptom gave way under the administration of the medicine. There can be no doubt, that the purgative plan of treatment, actively and steadily followed up in the manner recommended by Dr. Hamilton, is not only highly efficacious, but in a majority of instances will effect a cure; we have, however, witnessed many cases of chorea which were entirely unrelieved by this practice. With respect to the pain in the head, experienced in the case under consideration, Dr. Elliotson remarked, that it formed no objection to the administration of the carbonate of iron, and that he had observed in several instances that the head-ache was relieved by the medicine; at the same time he would admit that there might occur cases of chorea attended with pain in the head, in which abstraction of blood would be the correct plan of treatment.

CASE OF ARACHNITIS.

Dr. Elliotson considered the following as a well marked instance of inflammation, affecting the arachnoid membrane of the brain.

Ann B., 17 years of age, admitted on the 15th of March. She had been ill a fortnight, but was much worse for three days prior to admission. There was great heat of skin, with thirst; the pulse was 120, and weak, and the tongue was foul and clammy, except at its edges and tip, which were red to some breadth. The patient complained of pain affecting the whole head, and the eye-brows were almost momentarily corrugated; there was delirium, but not of a furious kind, with frequent grimaces. The pupils were very much dilated; the bowels were constipated, and there was some nausea. The account given of the patient was, that she was suddenly attacked with pain in the head whilst washing with cold water during menstruation; which was, in consequence, entirely suppressed. Dr. Elliotson directed a pound of blood to be abstracted from the arm; the head to be shaved, and an evaporating lotion to be constantly applied. *Six grains of calomel to be taken every six hours.*

On the following day, 16th, the symptoms were materially alleviated; there was still, however, pain in the head; the bowels had been relieved twice. Twenty leeches to be applied to the temples; the calomel to be continued, until ptyalism should be induced.

The report made on the 17th, states, the pain of the head gone; no delirium.

The calomel was continued until the evening of the 18th, when the mouth and gums had become much affected.

From this period, the patient went on rapidly improving, and became convalescent in the course of a few days. The ptyalism was checked almost immediately, by the use of the gargle of chlorate of soda.

CASE OF HYSTERIA, ATTENDED WITH POETIC FUROR.

Characteristic Sketches of the Physicians of St. Thomas's, in doggerel.

Medical writers, of all ages, have spoken of the *Proteon* nature of hysteria. Sydenham, amongst others, tells us of its "multiformis varietas," whilst some one whose name we cannot now call to mind, stigmatises this disease as a *diabolus redivivus*. It does not occur to us, however, that any author has described a case of hysteria, in which the *scriblo-mania* was a prominent symptom. There was lately, in St. Thomas's Hospital, a young woman affected with hysteria, in whom the paroxysms were invariably preceded by an irresistible propensity to write poetry. Her eye "in a fine frenzy rolled," and loudly she called for the materials, wherewithal to embody her thoughts.

We have some of the lyrics of this young Sappho now lying before us. Amongst others, is one entitled "The Physicians," and we are tempted to transcribe the four following lines:—

"Doctor Scott to all would be kind,
But keeps his patients close confin'd.
Doctor Williams is slow, not sure,—
Elliotson's plan is kill or cure."

ST. BARTHOLOMEW'S HOSPITAL.

CONCRETIONS IN THE BURSA MUCOSA OF THE PATELLA.

Maria Jones, ætat. 22, has been subject to occasional pains in the knee for the last six months. She has lived in the capacity of house-maid, and been accustomed to frequent kneeling. For the last six weeks the part has been tumefied and exceedingly painful, and finding no relief from quackery and nostrums, she sought admission into the Hospital, under Mr. Vincent. A blush of redness pervaded the exterior of the joint; it was swelled, and flexion and *complete* extension were productive of considerable pain. The bowels were briskly acted on by calomel and jalap, and senna mixture, and the part brought into a quiet state from the application of leeches and fomentations. After the subsidence of the tumefaction, examination discovered the presence of foreign bodies in the bursa of the patella; the girl had no previous knowledge of their existence. A dose of house physic was taken every second morning; and in the course of a week seven or eight *small* flattened bodies resembling in structure the crystalline humour, were removed by Mr. Vincent putting the integuments on the stretch, and opening the bursa obliquely with a double edged scalpel. A cold cloth was afterwards laid on the part.

On Sunday, (the day after the operation,) a considerable degree of erysipelatous inflammation surrounded the joint, extending itself upon the adjacent integuments; the countenance being flushed, tongue white, pulse quick and hard. Twenty leeches were applied to the part, fomentations used, and the saline mixture, with twenty minims of the vinum antimonii, taken every six hours.

Monday. The constitutional disturbance by no means abated. Seventy more leeches applied, four grains of calomel exhibited, and the saline antimonial (above) continued. The erysipelas had not extended.

Tuesday. Much better; passed a good night; tongue cleaner; erysipelas fading; slight discharge from the wound. Took a drachm of Epsom salts in the saline mixture three times a-day. Bread and water poultice to the part; the girl now rapidly recovered. Discharged cured.

CASE OF CANCER OF THE PENIS.

A short time since, a man presented himself at the Hospital, to obtain Mr. Lawrence's opinion respecting an ulcer on his penis, having previously shown it to different surgeons in the metropolis, but whose advice had hitherto been unattended with beneficial effect. The individual manifested a clearness of intellect far above the general stamp of Hospital patients. He stated himself to be forty-five years of age, and that at one period of his life he held a higher station in society; but from adverse circumstances had been compelled for the last five or six years, to follow the occupation of an ordinary journeyman mechanic, for the maintenance of his wife and family. The history he gives of his case in connexion with the visible character of the ulcer, are clear and decisive as to its nature.

About nine months since, there flowed a thin and somewhat fœtid discharge from beneath the prepuce, which continued for about two months, and during that period he had recourse to no other remedy than frequent ablution. There is no reason to suppose the patient had had impure connexion:—and the discharge is different from that taking place in gonorrhœa preputii. A fortnight previous to its cessation, he experienced a small distinct circumscribed hardness, about the size of a duck shot, at the anterior and front part of the glans penis, close to the orifice of the urethra. At the end of a month there was scarcely any perceptible increase, and it had been exempt from pain. About this period he lost a promising son, which caused him much mental distress. Immediately after this calamity, the tumour rapidly increased in size, and the glands in the groin became indurated and enlarged. Severe shooting pains frequently attacked the glans penis, and in about four months from the discovery of the induration, ulceration took place. Latterly he had been taking two grains of opium at night, with the eighth of a grain of oxymuriate of mercury twice a day. He was likewise ordered by the surgeon who prescribed the above, to live as well as he possibly could; to take *at least half a dozen glasses of Madeira*, and a pound of beef steaks, daily. His health, which had been previously tolerably good, now beginning to decline, Dr. Hamilton, who knew the patient in better times, wished him to have the advice of Mr. Lawrence.

March 26. The present character of the ulcer is that of genuine carcinoma. It presents a half sloughy, half phagedenic, aspect, with thick, hard, half cartilaginous everted edges, with a very fœtid sanious discharge. Three-fourths of the glans penis is already destroyed; the prepuce and integuments of the penis are unaffected. The glands in the groin have a hard and rocky feel, and are considerably enlarged. The countenance is anxious, and somewhat of a leaden cast. He has a quick, small pulse, and coated tongue; the bowels are generally constipated. Mr. Lawrence seemed anxious to take him into the Hospital; observing, that absolute rest was the first thing he had to

propose. The patient wished to be informed whether an operation would be necessary. Mr. Lawrence replied, that would be matter for future consideration. The hopelessness of devising any means calculated to afford relief, unless quietude were strictly enjoined, was represented to him; that the friction of his clothes, in his daily occupations, would tend to keep up continual irritation, and render abortive every measure that could be proposed. He had a wife and five children wholly dependant on him for support, which, he said, made it impossible for him to remain in the Hospital. Mr. Lawrence, finding it impossible for him to remain, told him to observe as much rest as he possibly could, and prescribed the following plan of treatment. The penis to be constantly enveloped in a bread poultice made with poppy water. A coloeynth and calomel pill to be taken occasionally to regulate the bowels, and the opium pill to be continued at night. He recommended him to discontinue his fattening treatment, to substitute a light unirritating diet, such as gruel, beef-tea, &c., and to interdict himself from all vinous and fermented liquors. Mr. Lawrence pointed out the case as genuine carcinoma; observing, that the period for attempting a cure had gone by, and that anodyne and soothing treatment was all that could now be attempted.

April 6. To-day the patient presented himself. The ulcer had lost its sloughy aspect; it had a clear and granulated appearance, the discharge being diminished, and less fœtid. There was not much pain, save when the urine passed over it. His tongue was cleaner, and countenance of a more healthy expression. He expressed great thankfulness for the relief already obtained—happily, poor fellow, unaware of its temporary nature.

INSTANCE OF "SOUND CHIRURGICAL."

On Monday last, a man was brought into the Hospital, a *brewer's dray* having passed over the chest. Immediately upon the occurrence of the accident, he was taken to a *member of the College* living in the neighbourhood, which said sapient S. Ch. *bled* him. We saw him four hours after admission; his pulse was small and weak; the surface of the body cold; breathing laborious; the speech feeble; countenance pale and anxious; in fact, he was gradually sinking. Examination discovered a number of ribs fractured on either side; those on the right seemingly driven in. There was no emphysema. A dose of calomel and jalap was exhibited. The vital powers slowly declined, and in the evening he expired.

Post-mortem Examination.

Twelve hours after death an examination took place. The right cavity of the chest contained at least two quarts of fluid blood; the second and three succeeding ribs of this side were driven in. There was an extravasation of blood beneath the pericardium, investing the appendix auriculæ of the right sinus venosus. The third, fourth, fifth, sixth, and seventh left ribs were fractured; there was no effusion into this cavity. We were unable to detect the source of the hæmorrhage, the parts being put into such confusion by the examiners. The coroner, it appears, was informed that it arose from LACERATION of the intercostal arteries. Well done—*march of intellect*!

MEDULLARY SARCOMA.

On Saturday, Mr. Earle removed from a female's arm, a tumour of the above species, of the size of a large horse-bean, having three projecting points; the central more prominent, and of an elastic feel, situated about two inches above the olecranon, on the posterior part of the arm. An incision being made considerably beyond the limits of the tumour, it was dissected off the fascia covering the triceps muscle. Its enlarged nutrient vessels bled profusely during the removal. A section being made in the short axis of the tumour, a central cavity was discovered partly occupied by a substance of the appearance and consistence of putrid brain, intersected throughout with dark bloody-looking lines. The walls of the cavity seemed of a somewhat hard carcinomatous warty structure, similar to that occasionally met with in the centre of scirrhous testicle. Mr. Earle regarded the tumour as fungus hæmatodes, Mr. Lloyd thought it carcinomatous, and Mr. Langstaff, on its being shown him, was of opinion it was neither one nor the other, but a structure partaking of the two—we have called it medullary sarcoma, as described by Mr. Abernethy. The following is the history the woman gives of the case: About nine months since, she perceived an induration of the size of a horse-bean, in the situation of the tumour, which gradually augmented, until it became as large as a small walnut. At the end of five months it ulcerated, and shot forth a fungus. During this period, it was tolerably exempt from pain; but afterwards, the pain at times was severe; and if the fungus happened to be struck, it bled—only slightly, however. The health had been very indifferent for the last two years; she suffered much from periodical head-aches. Since the operation, there has been considerable constitutional disturbance; an accelerated pulse, and coated tongue, with that peculiar cast of countenance so frequently indicative of organic disease. The febrile excitement has been quieted by the usual remedies, and she appears to be doing well.

HOSPITAL OF SURGERY.

Panton Square, St. James's.

CANCER OF THE SKIN.

— B., æt. 82. There is an ulcer of an irregular form, situated at the upper part of the right cheek and ala nasi, extending under the eye to its outer angle, and from thence over the superior orbitar process of the malar bone, as far as the temple. The upper portion of this bone is bare, and there is a deep excavation capable of containing a moderate sized walnut, by which the lower and outer part of the globe of the eye is exposed, the integuments and muscular fibres of the orbicularis of nearly half of the superior palpebra are destroyed, the whole of the inferior palpebra is destroyed in a similar manner. The surface of the sore, around the orbit, is very unequal, and its edges are jagged and undermined. The eye is sound, but from the destruction of its appendages, she is unable to use it. The ulceration of the cheek and ala nasi is superficial, and presents an irregular granular surface, with an elevated and hardened margin. From the whole of this sore, there is a copious discharge of a thin acrid and offensive sanies. She experiences a most acute lancinating pain in the sore, which is nearly constant during the day, but is somewhat easier at night. She likewise complains of a sense of confusion and noise in the head. Since the pain has become so severe, there have been repeated bleedings from the bottom of the excavation in the orbit.

Twenty years ago, a small pimple was observed a little below the eye, which a few years afterwards broke into a sore, that healed partially from time to time, a scab forming upon it. It is only six years since the disease has made such rapid progress. She has used a variety of applications with but little relief. No enlarged glands can be discovered; but from the advanced age of the patient, and the extent of the disease, Mr. Wardrop deems it improper to attempt removing it with the knife.

CANCER OF THE SKIN.

An athletic man, 54 years of age, has a tumour the bulk of an almond, situated on the upper part of the cheek, its edge extending over the margin of the orbit upon the lower eyelid; the skin covering it is of a dark purple colour, and on its centre there is a small ulcerated excavation that would admit half of a split pea, through which issues a sanious discharge. It is firm and unyielding to the touch, presenting the common character of scirrhus. None of the adjacent absorbent glands appear affected. Upwards of three years ago, a wart formed on the skin, which has since increased into the present tumour. The patient's bowels having been kept more open than natural for some days, on the 16th inst. the tumour was extirpated, by including it between two elliptical incisions. After allowing the wound to bleed very freely, its surface was covered with a piece of lint, one small artery being previously tied; and no other dressings were employed.

WORKS RECEIVED FOR REVIEW.

Conversations on Anatomy, Physiology, and Surgery. By Archibald Robertson, M.D., Lecturer on the Practice of Physic, and Author of "Colloquia Anatomica." Edinburgh, 1827. Buchanan, 12mo. pp. 446.

A General Table of Atomic Numbers, or Chemical Equivalents, to which is added a Table of Pharmaceutical Equivalents, and an Introduction to the Atomic Theory for the use of Students. London, Anderson, 1827. pp. 36.

Two Introductory Lectures on Materia Medica, delivered at the opening of the Course, and at the commencement of the Vegetable Materia Medica, at Mr. Grainger's Theatre, Webb-street, Maze-pond, Borough, and at the New Medical School, Little Dean-street, Soho. By Francis Boott, M. D. London, Highley, 1827. 8vo. pp. 70.

Portrait of R. D. Grainger, Esq. Lecturer on Anatomy and Physiology, 12½ inches by 9 inches. London, Highley, 1827.

TO CORRESPONDENTS.

Advertisements communicated by Letter cannot be inserted, unless accompanied with a satisfactory reference.

We have received a letter from Mr. Lizars in reply to a Borough Student in No. 185 of this Journal; Mr. Lizars says, "I shall lose no time in writing the remaining physiological and pathological observations."

Communications with the following signatures have come to hand;—Damon—Veritas—Philo Veritas—No Bat—A Hater of Bats—Questo.

The articles forwarded by Mr. Stafford Smith are under consideration.